

# ARIZONA ELECTRONIC ATLAS TRAINING MODULE

## PURPOSE:

The purpose of this module is to help trainers conduct sessions which teach librarians, or others, how to effectively use the Arizona Electronic Atlas. The module is comprised of several sections, designed to work as one self contained unit. A training session using this module will take approximately 60-75 minutes to complete.

There are training scripts that accompany several sections of the module indicated by the notation (script). Within these scripts any text surrounded by quotes indicates material meant to be read aloud by the trainer.

Each section can be downloaded and printed separately, or a link to the **entire training script** can be followed.

## A. INTRODUCTION

1. **Goals** of the session
2. Participants will do a **pre-exercise** designed to introduce them to simplicity of the mechanics of the Atlas **(script)**

## B. INFORMATION AND DEMONSTRATION

1. Purpose of the Atlas **(script)**
2. Introduction to the four map themes **(script)**
3. Explain concept of layers **(script)**
4. Show map layout: Show individual buttons that correspond to specific functions, e.g. go over toolbar, etc. include: zoom, pan, print, basic query, place finder, data download **(script)**
5. Show Tutorials, FAQ, Glossary, Teaching Resources **(script)**

## C. ATLAS EXERCISES

1. Students will complete the **first exercise** working step by step with the trainer **(script)**
2. Do **second exercise** individually. Lead a discussion. **(script)**

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## MODULE GOALS AND OBJECTIVES

### GOAL:

- Students will be able to use and to demonstrate to others, the basic functions of the Atlas.

### OBJECTIVES:

- Students will demonstrate proficiency in the basic functions of the Arizona Electronic Atlas
- Students will be able to identify the major purposes of the Atlas
- Students will be able to select the appropriate theme based on a particular information question or problem
- Students will be able to identify and locate available data

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### SCRIPT FOR PRE-EXERCISE

All text surrounded by quotes indicates the suggested script for the trainer to follow. Text without quotes or in parenthesis indicates notes to the trainer.

"The basic functions of the Atlas are easy to learn and use. We will begin with this exercise. Please work independently and I will circulate around the room to provide assistance as needed."

#### Pre-Exercise

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### It's Really Easy!!!! Pre-Exercise

1. Go to <http://atlas.library.arizona.edu>
2. Click on "Make a Map" on the upper left hand side of the screen.
3. Click on "Natural Resources" on the left hand side of the screen.
4. On the right hand side of the screen you will see a list under the Areas folder:



5. Scroll down to EPA Ecoregions
6. Click in the white box to the left of the words EPA Ecoregions. (A checkmark will appear in the box and next to it a red box with the message "Redraw map.")
7. Go to the bottom of the screen on the right hand side. You will find a brown button that says "Redraw map." Click on this button.
8. How did the map change?

**THAT'S IT!!!!**

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TRAINING MODULE SCRIPT  
PURPOSE OF THE ATLAS

All text surrounded by quotes indicates the suggested script for the trainer to follow. Text without quotes or in parenthesis indicates notes to the trainer.

"The purpose of the Atlas is to:

- allow users to create dynamic maps of Arizona, choosing the data that meets their needs
- allow users to save, email, and download their maps so they may be integrated into other applications
- provide easy and convenient access to geo-spatial data
- improve geographic literacy"

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TRAINING MODULE  
SCRIPT-MAP THEMES

All text surrounded by quotes indicates the suggested script for the trainer to follow. Text without quotes or in parenthesis indicates notes to the trainer.

"The Atlas has more data available than can easily be viewed in one map, so four map themes were developed. These map themes are: Natural Resources, People and Society, Business and Economics, and People and Environment" (direct students to go to **Make a Map** so that they can follow along).

"Within each theme, you can compare data and see some relationships between one data layer and another. For example the Environment and Population theme contains data such as Environmental Protection Agency Superfund Sites, Percent of total death for selected causes such as lung cancer, female breast cancer by county, and Percent of each race by census tract, county, congressional district."

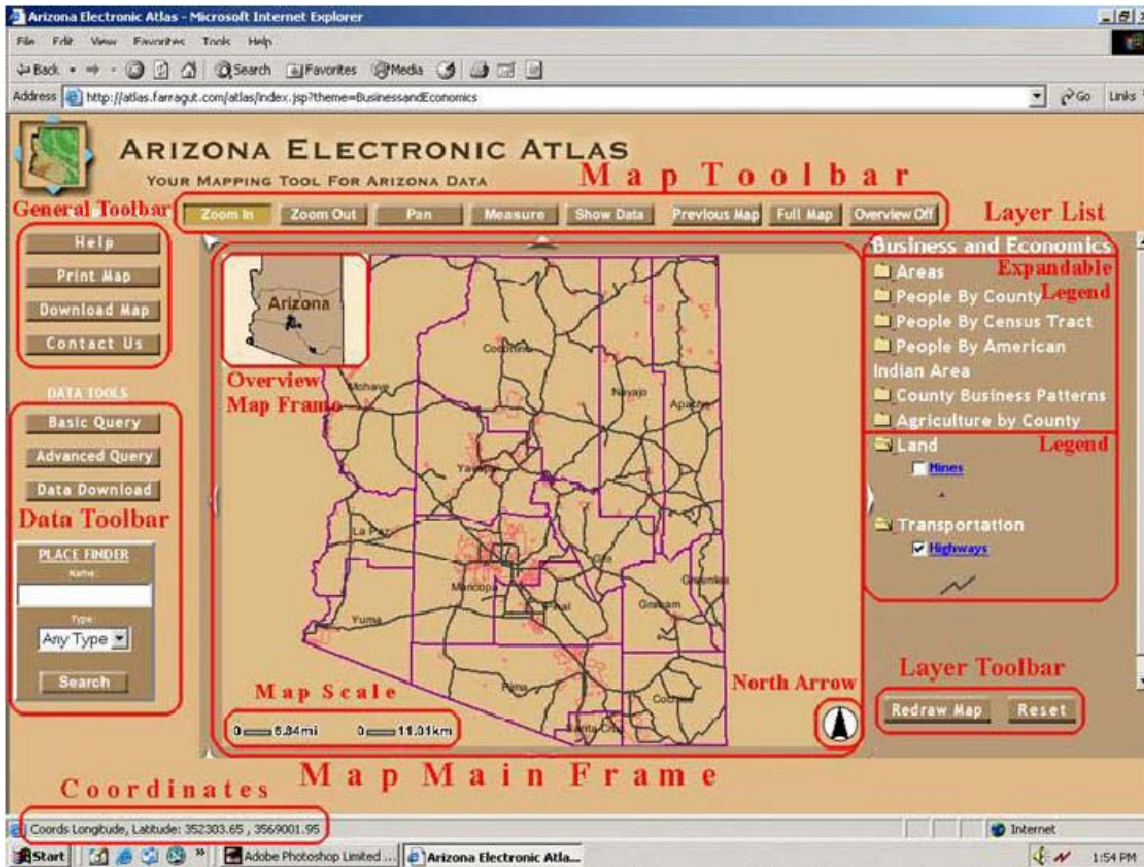
Each theme, as you can see has some unique data associated with it."

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## SCRIPT FOR SHOWING MAP LAYOUT

All text surrounded by quotes indicates the suggested script for the trainer to follow. Text without quotes or in parenthesis indicates notes to the trainer.

Go into the **screen layout tutorial** (as shown below)



"The map is your canvas: on the right --- content, information and data to create your maps  
Top --- are your tools - to view the map in various ways and to manipulate it, Left --- are additional function tools to print, download and to query the map or atlas

"The print map button here (show where it is located) will allow you to print any map you've created." When you click on the button, it this screen will come up (click on button). This screen will allow you to create a title for the map, and enter your name as author, and select some print options"

"A Basic query (click on basic query) will allow you to locate a specific county, city or congressional district. Let's do a query for Bisbee." (enter Bisbee after clicking on city). So one map has been found for Bisbee, (click on magnifying glass) and bring up map. Note that the city **boundaries** are in green.

"You can also do a Placefinder search for a variety of features. If you'd like to search for a particular type of place, use the pull down menu (show the pull down menu). As you can see, this menu will let you search for a variety of place types such as an airport, an arroyo, or a bridge."

This data comes from a government database called Geographic Names Information System Database. Let's search for Bisbee under placefinder (i.e. get a **"Place Point"** for Bisbee) (show how task done). You can get additional data by turning on "get data" and clicking on the point."

"Now I'll show how to make a map with two data layers (go into new theme- Environment and Population; click on the folder "People by County"; click on the box to the left of "2000 Percent Total Deaths-Female Breast Cancer" and the box to the left of "EPA Superfund Sites". Click "Redraw Map." "Orange is the highest, white is the lowest. The results may or may not allow you to make a direct correlation; however you see a graphic display of the data. This information may bring up questions to pursue.

"Some layers present such detailed information that you must "Zoom In" in order to see them properly (begin making a map in the Natural Resources Theme in order to show this)." For example - when you look at Land Native Vegetation it is telling you to "Zoom In." (Click on Navajo County /Draw Box and keep zooming in until the check box for Native Vegetation appears) "When the check box next to Native Vegetation appears, that means we've zoomed in enough to bring up that layer." (do so now)

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## SCRIPT FOR TUTORIALS, FAQ, GLOSSARY, AND LINKS

All text surrounded by quotes indicates the suggested script for the trainer to follow. Text without quotes or in parenthesis indicates notes to the trainer.

### **TUTORIALS:**

"The **tutorials** were designed for people who prefer to learn by working alone, and going through instructions in a methodical way. There are several tutorials available (click on tutorials and scroll down to demonstrate):

1. "Screen Layout
2. How to Make a Map – Basic Tutorial which shows how to select a map theme, layer, zoom in, zoom out, pan, and print a map.
3. How to Make a Map – Intermediate Tutorial which shows how to do a basic query, use Place Finder, and download a map.
4. Advanced Tutorial which shows how to use the measure tool, how to show data, and do advanced queries

There is also a tutorial which shows how to import an Atlas map into either Word or PowerPoint."

### **FAQ (Frequently Asked Questions):**

"There is also a **FAQ** section (click on FAQs and scroll down to illustrate). This section was designed to answer common questions/difficulties about the Atlas. It is divided into sections such as: Hints, Requirements, How Do I?, About the Maps, Data Information, and Problems." Scroll down and read a few of the specific questions aloud.

## GLOSSARY:

"The glossary was created to explain unfamiliar terminology (click on **glossary** and scroll down to illustrate). The glossary includes geographic terms, census terms, and GIS terms, to name a few.

Sources of glossary terms include:

1. USGS Glossary <<http://interactive2.usgs.gov/glossary>> Site no longer available
2. National Weather Service Climate Prediction Center Glossary <<http://www.cpc.ncep.noaa.gov/products/outreach/glossary.html>>
3. Encyclopedia Britannica Online <<http://search.eb.com/dictionary>> All other definitions are from the American Factfinder <<http://factfinder.census.gov/servlet/BasicFactsServlet>> and other sources.

## LINKS:

"**Links** (click on to illustrate) provide access to additional map resources such as map information, creation and displays at the national, regional, state and local level. Links to map data such as statistics on a variety of subjects such as labor, health, employment and education are also included." **OPTIONAL:** (if your trainees are teachers, this page may be useful for them)

"The **teaching resources** page (click on link to illustrate) provides resources to assist instructors in developing assignments that use the Arizona Electronic Atlas. Two learning modules have been written so far. These include Biotic Communities - the goal of this learning module is to gather relevant natural resources information for a specified stretch of highway in Arizona and Environment and Society - the goal of this learning module is to investigate the spatial relationship between EPA Superfund Sites and Hispanics in the Phoenix area.

The developers of the Atlas invite you to share any modules you develop. Please contact **Chris Kollen** if you would like to do this.

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## SCRIPT FOR EXERCISE 1

All text surrounded by quotes indicates the suggested script for the trainer to follow. Text without quotes or in parenthesis indicates notes to the trainer.

Now we will complete Exercise 1, working together step by step. I will circulate around the room and provide assistance as needed. Please think about the following as you work on the exercise: what problems, if any, did you experience? What concerns or questions do you have about the Atlas? We will have a whole group discussion on this once we complete the exercise."

(After everyone is completed) "Please share any problems, concerns, or questions you have about the Atlas now that you have completed Exercise 1."

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## TRAINING MODULE EXERCISE 1

1. You have been asked to create a map of the total births for the year 2000 for the entire state of Arizona.
  2. Go to the Atlas home page: <http://atlas.library.arizona.edu/>
  3. Click on "Make a Map" located at the top left of the screen
  4. Look at the various themes
  5. Which one would you select to answer this assignment?
  6. Why did you select this theme?
  7. Click on the theme the class agrees on.
  8. Go to the layer list on the right hand side of the screen.
  9. Scroll down and Click on People by County
  10. Keeping the assignment in mind, please scroll down and select the following layer: 2000 total births
  11. Click on "Redraw Map" at the bottom of the screen
  12. View the map you created.
  13. Click on the "Print Map" button located on the left side of the screen
  14. Type in a title. Type your name in as the creator.
  15. Click on "Create Print Page."
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## MODULE EXERCISE 2 SCRIPT

All text surrounded by quotes indicates the suggested script for the trainer to follow. Text without quotes or in parenthesis indicates notes to the trainer.

"The purpose of the next exercise is to give you a chance to work individually at producing a map with two layers. I will circulate around the room and help as needed. After everyone has had a chance to complete the exercise, I will ask you to participate in a discussion about which map theme you chose and why, and how answered question 10 in the exercise. Please begin."

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## TRAINING MODULE EXERCISE 2

1. Return to the Main Atlas page <http://atlas.library.arizona.edu/> if you haven't already.
2. You have an assignment that asks you to map the % deaths by lung cancer in 2000 in Arizona by county, and the Superfund sites in the Phoenix area.
3. Click on "Make a Map" located at the top left of the screen.
4. Look at the various themes.

5. Which one would you select to answer this assignment?
6. Write down which map theme is most appropriate? Why did you select this theme?
7. Click on the theme you selected.
8. Make certain that the county boundary layer is on.
9. Keeping the assignment in mind, please select the following layers:
  - % deaths by lung cancer in 2000 by county
  - EPA Superfund sites
10. What did you learn from the graphic display of the data?
11. Return to the **Main Atlas page**. If you have completed the exercises early please explore the atlas and create maps of your choice. And have fun!!!

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