

Helpful AEJEE Tips

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1. Creating a GIS layer with Excel

a. Launch Microsoft Excel.

The first row in the table, or "header", defines the information contained in each column. Each column name is a single word, less than ten characters long, and contains only letters or numbers.

Use "lat" for the geographic **latitude** coordinate.

Use "lon" for the geographic **longitude** coordinate.

Use decimal degrees for the geographic coordinates.

Use negative numbers for latitudes in the southern hemisphere.

Use negative numbers for longitudes west of the Prime Meridian.

b. After the Excel file has been populated with your data,

Select from the top menu bar **File > Save As...** and choose **Text (Tab delimited) (*.txt)** from the **Save as type:** dropdown menu.

When asked "Do you want to keep the workbook in this format," click **YES**

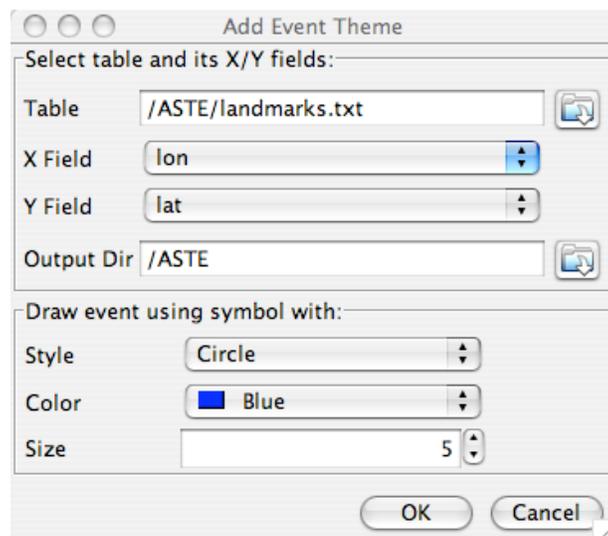
c. Open AEJEE.

d. Select **View > Add Event Theme**.

In the **Add Event Theme** window, click to the right of the **Table** field.

e. Navigate to your **.txt** file to select it. Click **OPEN** to add the file to your project.

f. Back in the **Add Event Theme** window, click the **X Field** drop-down menu, and choose **lon**. Choose **lat** from the **Y Field** drop-down menu. Click **OK** to plot the event theme on the map.



AEJEE creates 3 new files with extensions **.shp**, **.dbf.**, and **.shx** that work together to make a complete shapefile. **.shp** = shapefile; **.shx** = header; and **.dbf** = associated database file. The event theme has been added to your map as a separate layer.

2. Renaming your shape files.

GIS files are located in many places and have many interesting file names. Some of these names may not make much sense to you or your students. For example, the Lehigh County

roads files from the Tiger Census database contain the following files names:
tgr420771kA.shp, tgr420771kA.shx, and tgr420771kA.dbf. In a GIS display, the words tgr420771kA may not describe the layer in a way that makes sense to the user. After downloading the files, rename all three files with a file name that will be easily understood. For example, I would rename the **tgr420771kA** to **Lehigh County Roads**. My three new files will be: **Lehigh County Roads.shp, Lehigh County Roads.shx, and Lehigh County Roads.dbf.**

After renaming the files, add the shape file (Lehigh County Roads.shp) to your GIS map.

3. Creating a file that includes hotlinks for images using AEJEE

Use Excel to set up a table.

Label the columns in the top row as follows:

LAT LONG NAME HOTLINK

Add additional fields after HOTLINK.

Save as: **.txt Tab delimited.**

In AEJEE, add as an **Event Theme.**

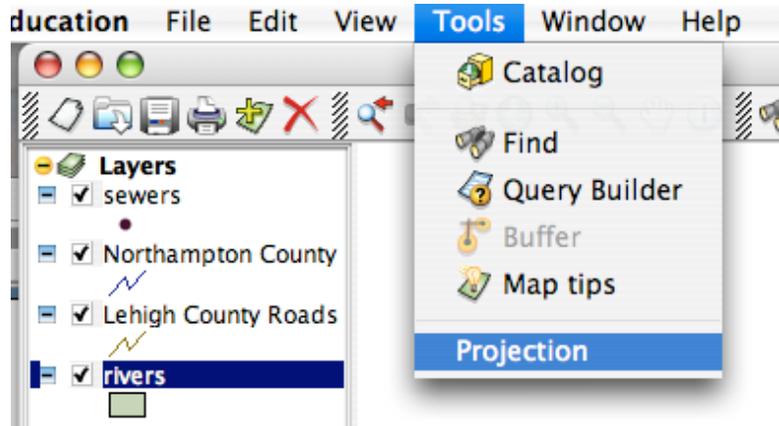
4. Using files from different sources – solving projection issues.

GIS files may be created using different projections.

Many files from government agencies use a Geographic Latitude / Longitude projection.

If you add a file and cannot view it in your GIS display, try changing the projection to Geographic Latitude / Longitude.

Click on **Tools**.
 Highlight **Projection**.



Click: **Geographic Latitude / Longitude**
 Select: **Latitude / Longitude**
 Click: **OK**

