Google MyMaps provides an online platform for the creation of custom annotated maps. Nearly identical in appearance to the familiar Google Maps online application, MyMaps provides tools for adding markers, lines, and regions with titles and multimedia descriptions to a base map. Google MyMaps supports the creation of up to 10 layers of information on a single map and up to 10,000 individual points, lines, or shapes. While MyMaps may lack the power of dedicated Geographical Information Systems (GIS) software such as ArcGIS or the open-source QGIS, it is a useful tool for teaching and learning because it is easy to use, the ease with which maps can be shared publically on the web, and in its ability to automatically locate (geo-reference) placenames.

Google MyMaps can be found at <u>https://www.google.com/maps/d/</u>. If you are not already logged into Google, you will be prompted to do so. If you have created maps in the past, after logging in you will be presented with a gallery of your maps. Click the **'Create New Map'** button to create a new 'blank' map.

The Google MyMaps Interface

The box in the upper left-hand corner shows you the current title of the map, a list of layers on your map, listings of the individual points,



MCGRAW CE

&

TEACHING

THE

lines, and regions contained within those layers, and a tool for selecting the base-layer map. To the right of this box, you will find a search field for locating places on the map, and a selection of tools for adding elements to the map. Rename your map by clicking once on 'Untitled Map'.

Adding points, lines, and regions

From the tools menu, click the marker icon and then click in the map area of the screen. You cursor should have changed to crosshairs. Upon clicking on the map, a window will appear allowing you to assign a title and description to this marker. You can zoom into the map using the plus and minus button in the lower-right hand corner of the map. Notice also that in this window you can add images from Google images, Drive, or upload from your computer, and add video from YouTube.

The process for adding lines and regions is very similar. Both lines and regions are created using the line tool in the toolbar. Select this tool and click multiple times within the map to create a line. Double click to complete a line or click on the first point in a line to create a polygon.

Notice that each new point, line or region, gets added to a list in the left-hand informational section.

Adding styles and changing icons

Click on one of the markers you have created. The resulting window provides you with some options concerning the appearance of this marker. Clicking the pencil icon allows you to edit the title and description of this marker. Clicking the trash can allows you to delete this marker. Selecting the left-most paint can icon allows you to set the color and icon associated with this marker.

Import a list of places

Adding points to a map in this way can also be rather tedious if you have many locations to plot. Google MyMaps also allows you to import a list of locations in the form of a spreadsheet and to have the locations in that spreadsheet automatically plotted on the map. To do this, you should first download a sample spreadsheet containing titles and locations. For





THE MCGRAW CEN

for TEACHING & LEARNING

this quickstart guide, you should download a spreadsheet of minor-league baseball teams by going to:

https://raw.githubusercontent.com/McGrawCenter/workshopdata/master/googlemymaps/baseball.csv

This file contains various information about some (but not all) minor-league baseball teams in the United States. After you have saved this file to your desktop, create a new layer in your map by clicking the **Add Layer** icon. A new layer should now appear in your list named 'Untitled layer' with a button labeled **'Import'**.

Click Import and navigate to the file that you downloaded. You will then be asked to identify the columns from the dataset that can be used to position the markers on the map. Mark the checkboxes next to City and State and click **Continue**.

You will now be asked for the column in your data that should be used as the title of the markers. Select Team and click **Finish**.

It may take a few moments for Google to process the information from your spreadsheet. In the background, Google is taking each place name from the spreadsheet, determining the latitude and longitude coordinates of that location, and then placing a marker at that geo-coordinate. When complete, your new layer should be called 'baseball.csv' and your map should contain points corresponding to the baseball team data contained in the spreadsheet.

Styling markers based on data

Clicking on the markers created from this import reveals that each location contains some valuable information. We can make this map more useful by color coding the marks according to the information associated with the markers. To do this, Click the **Uniform style** button just under the title of the layer in the left-hand

🗹 base	Group places by	×
~ 7	Uniform style	\$
Q A	Set labels	
Base	No labels	\$

information box. Open the first dropdown menu and select **LEAGUE** under the section labeled **Style by data column**. After this process completes, a color coded list of the various leagues to which the teams are affiliated appears.

A slightly different visualization can be achieved by selecting CAPACITY rather than LEAGUE. Because CAPACITY is a numeric value, Google is able to color code the marks based on a range of numbers rather than only specific text values. Open again the **Uniform style** menu and select CAPACITY in the upper dropdown menu. You can now select Ranges, determine how numerically broad each range should be, and a color spectrum to use for the range.