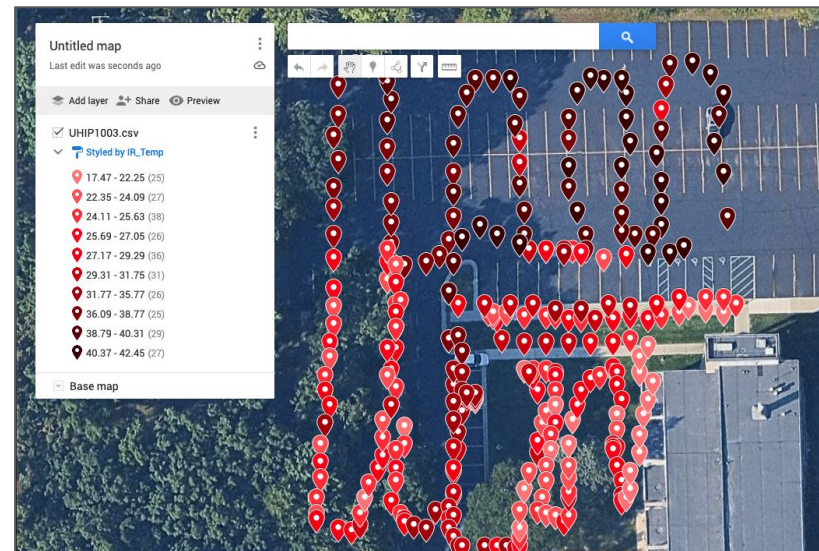


Using Google My Maps to Plot UHIP Data

<https://mymaps.google.com>

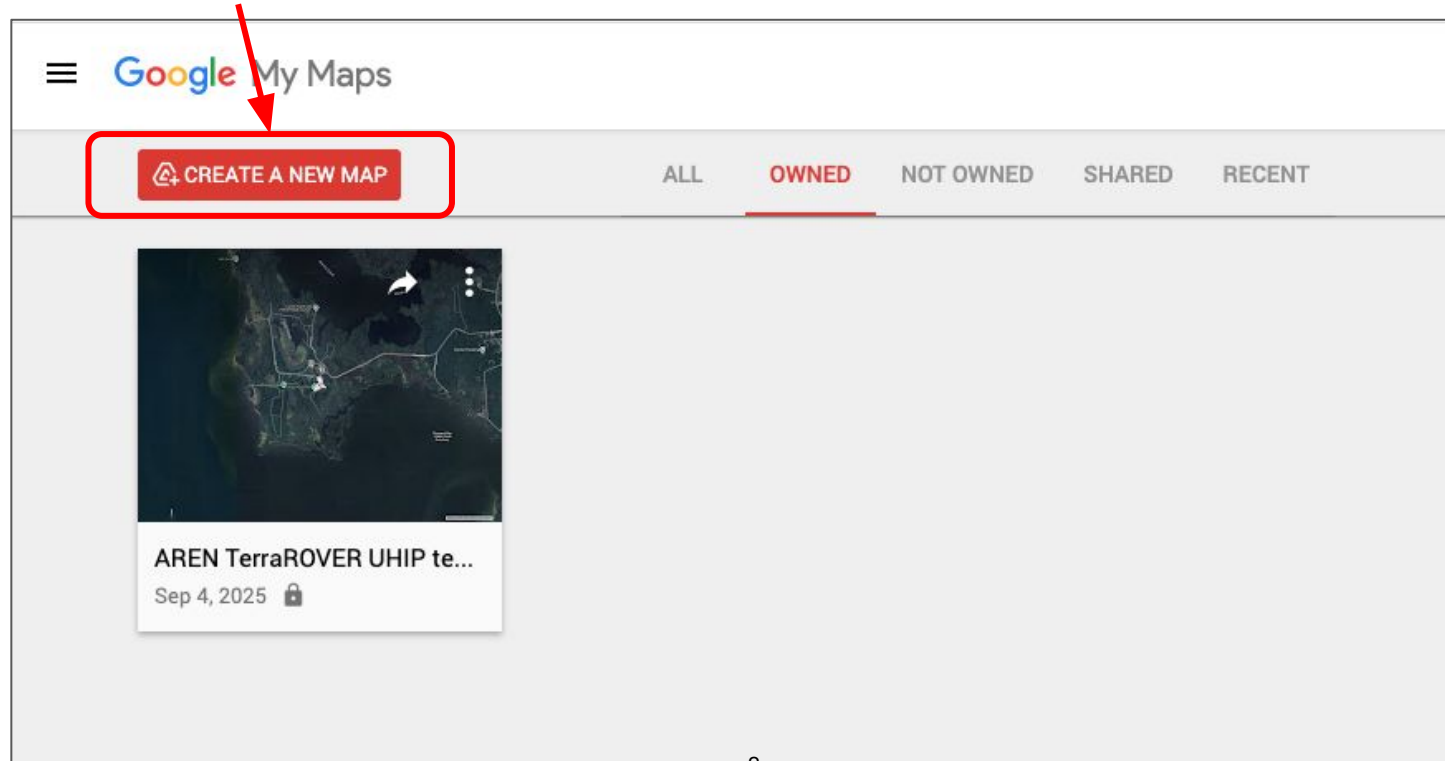
Once you have collected data with your TerraROVER and Urban Heat Island Instrumentation package, you need a way to visualize the data. One fast and easy way to accomplish this is with Google My Maps, a free online data visualization tool. All you need to use it is a Google account. This tool will allow you to plot and symbolize your data with a color ramp over a variety of basemaps - including fairly high resolution imagery.

The next few pages will walk you through the process of plotting your data, symbolizing it with a color ramp to represent the surface temperature values, and changing the basemap to view the data over background imagery. You can then begin to look for correlations and patterns between the surface temperature data and the surface materials on which they were collected.



Using Google My Maps to Plot UHIP Data

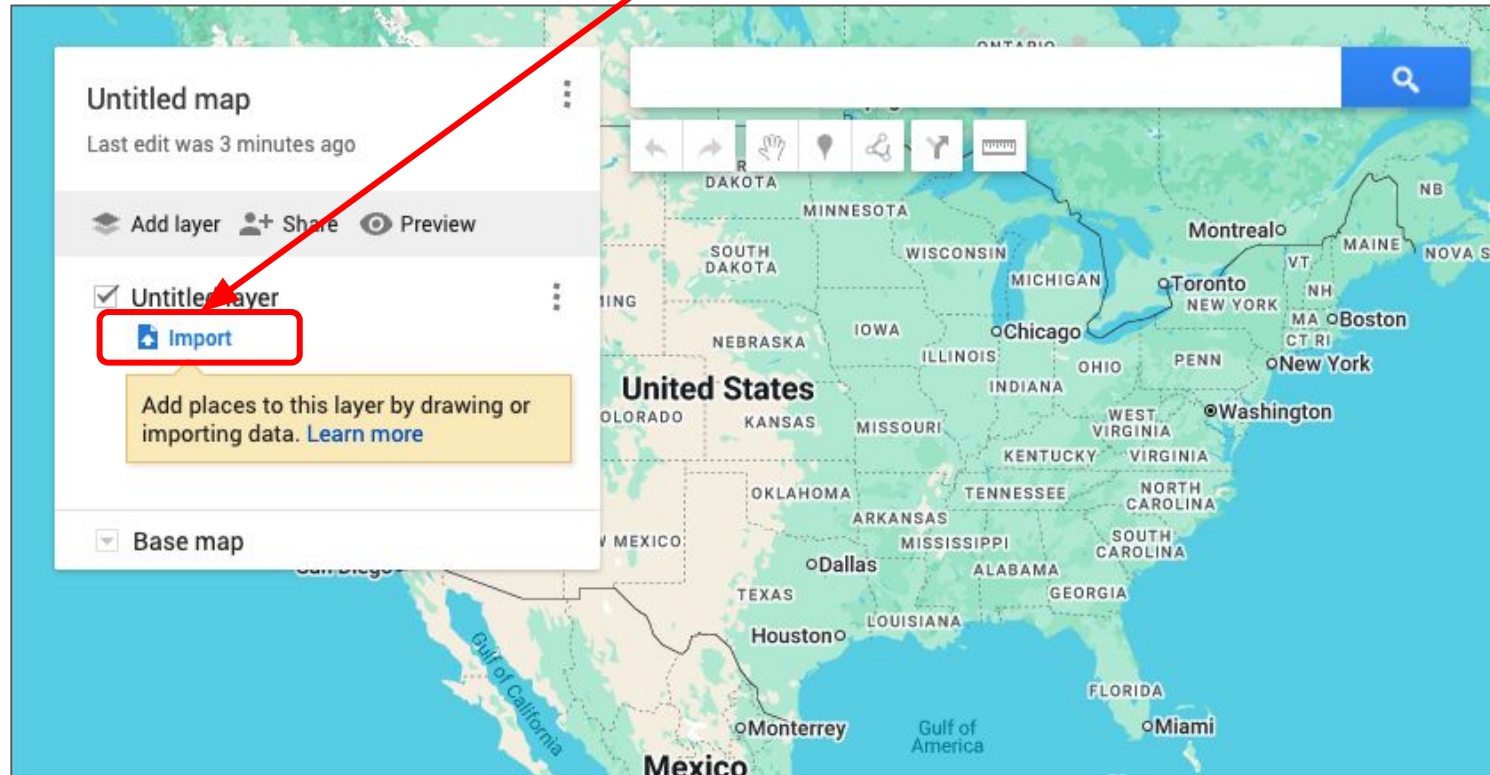
1. Open **Google My Maps**: <https://mymaps.google.com>
2. Click the **Create a New Map** button



Using Google My Maps to Plot UHIP Data



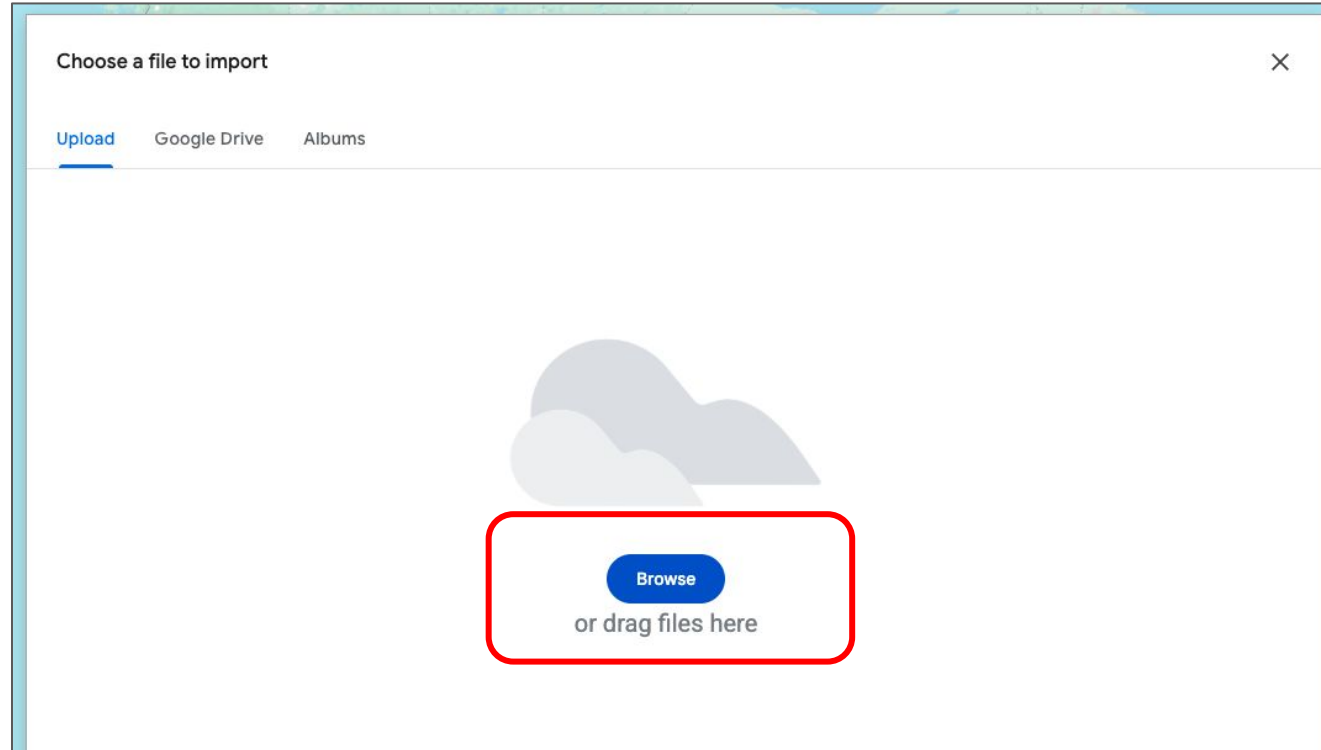
3. In the popup, under Untitled layer, click **Import**



Using Google My Maps to Plot UHIP Data

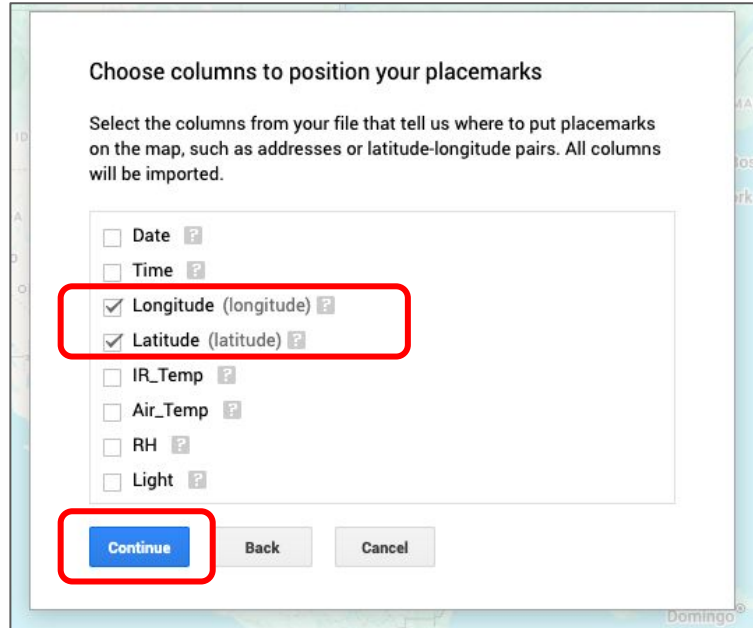


4. Drag your UHIP CSV file into the window (or click Browse and navigate to it)



Using Google My Maps to Plot UHIP Data

5. Make sure **Longitude** and **Latitude** are selected in the “Choose columns to position your placemarks” window



Choose columns to position your placemarks

Select the columns from your file that tell us where to put placemarks on the map, such as addresses or latitude-longitude pairs. All columns will be imported.

- ☐ Date ?
- ☐ Time ?
- ☒ Longitude (longitude) ?
- ☒ Latitude (latitude) ?
- ☐ IR_Temp ?
- ☐ Air_Temp ?
- ☐ RH ?
- ☐ Light ?

Continue Back Cancel

6. Click **Continue**

Using Google My Maps to Plot UHIP Data



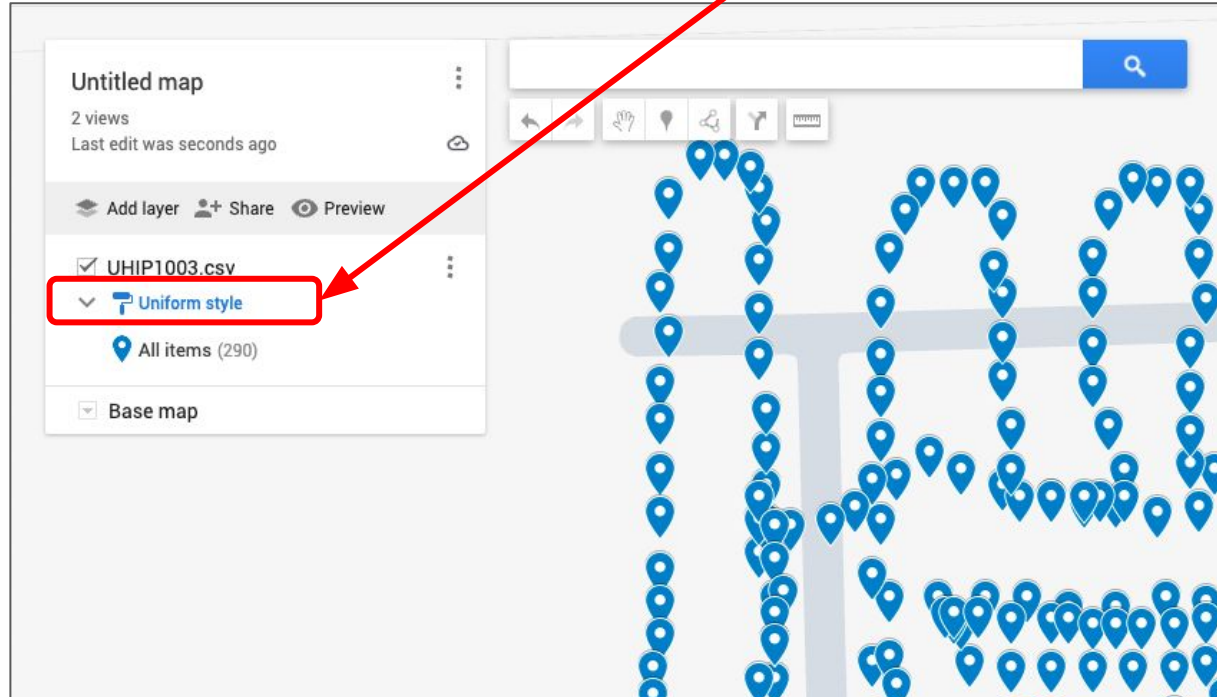
7. Select **IR_Temp** as the column to title your markers

A screenshot of a web-based dialog box titled "Choose a column to title your markers". Below the title, it says "Pick a column to use as the title for the placemarks, such as the name of the location or person." There is a list of radio button options: "Date", "Time", "Longitude", "Latitude", "IR_Temp", "Air_Temp", "RH", and "Light". The "IR_Temp" option is selected and highlighted with a red rectangular box. At the bottom of the dialog, there are three buttons: "Finish", "Back", and "Cancel". The "Finish" button is highlighted with a red rectangular box.

8. Click **Finish**

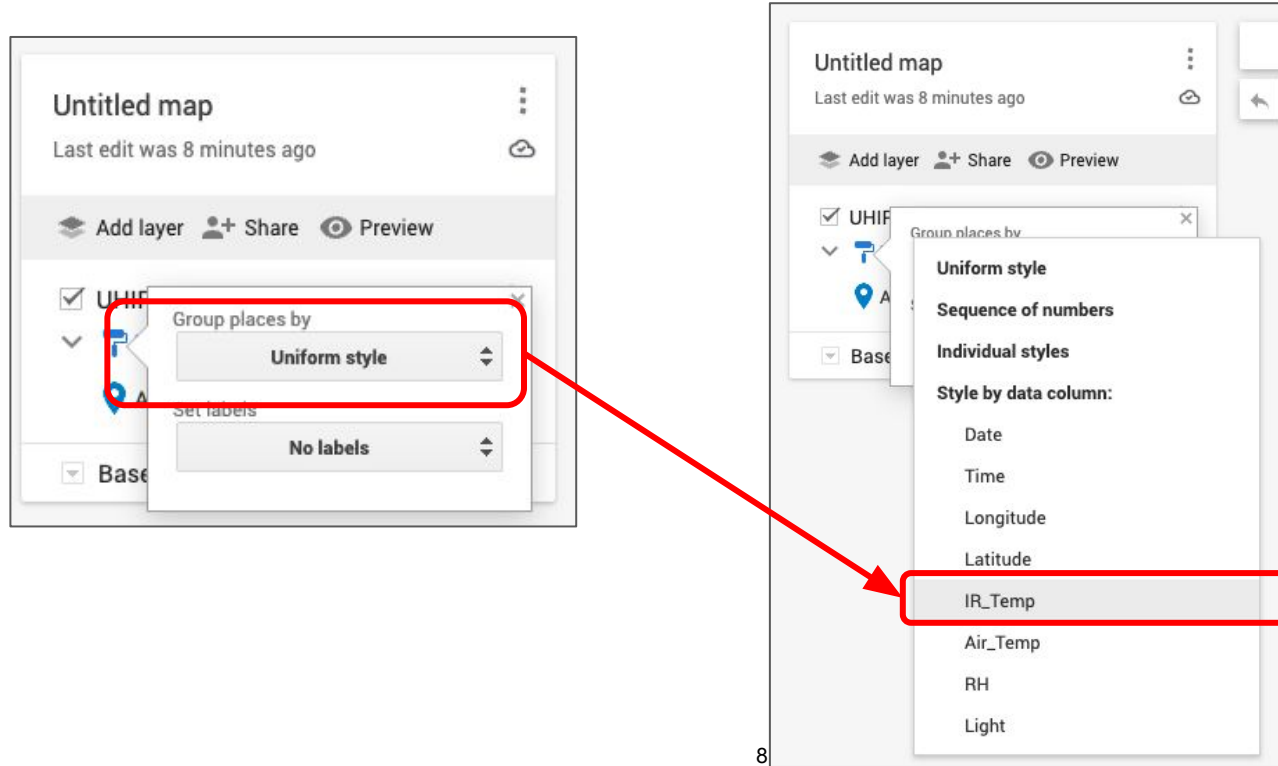
Using Google My Maps to Plot UHIP Data

9. The map will redraw with your data. Click **Uniform style** in the info window.



Using Google My Maps to Plot UHIP Data

10. Click the **Uniform style** button in the pop up
11. Select **IR_Temp** from the **Style by data column** in the dropdown menu



The image displays two screenshots of the Google My Maps interface, illustrating the steps to style UHIP data.

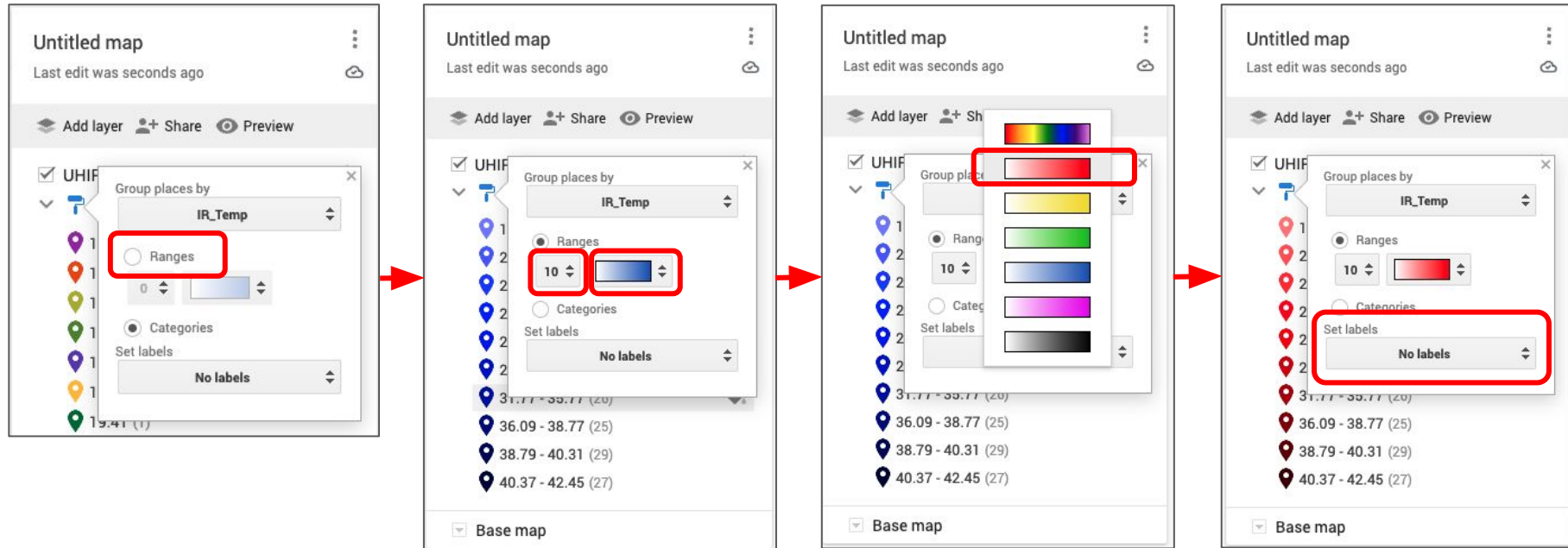
Left Screenshot: Shows the 'Untitled map' interface. The 'Group places by' dropdown menu is open, and the 'Uniform style' option is selected. The 'Set labels' dropdown menu is also visible, showing 'No labels' selected.

Right Screenshot: Shows the 'Untitled map' interface. The 'Style by data column' dropdown menu is open, and the 'IR_Temp' option is selected. The 'Group places by' dropdown menu is also visible, showing 'Uniform style' selected.

A red arrow points from the 'Uniform style' button in the left screenshot to the 'IR_Temp' option in the right screenshot, indicating the sequence of actions.

Using Google My Maps to Plot UHIP Data

12. Click the **Ranges** button to change the style type
13. Change number to **10**
14. Click the color ramp and select the **red** ramp from the pop-up
15. Leave **Set labels** set to **No labels** (the default)



The sequence of screenshots illustrates the styling process for UHIP data in Google My Maps:

- Step 1:** The 'Group places by' dropdown is set to 'IR_Temp'. The 'Ranges' radio button is selected and highlighted with a red box. The 'Set labels' dropdown is set to 'No labels'.
- Step 2:** The range value is changed to '10' and a color ramp is selected, both highlighted with red boxes.
- Step 3:** The color ramp is selected as 'red', highlighted with a red box.
- Step 4:** The 'Set labels' dropdown is set to 'No labels', highlighted with a red box.

Each screenshot shows a list of UHIP data points with their corresponding IR_Temp ranges and counts, such as '36.09 - 38.77 (25)'.

Using Google My Maps to Plot UHIP Data

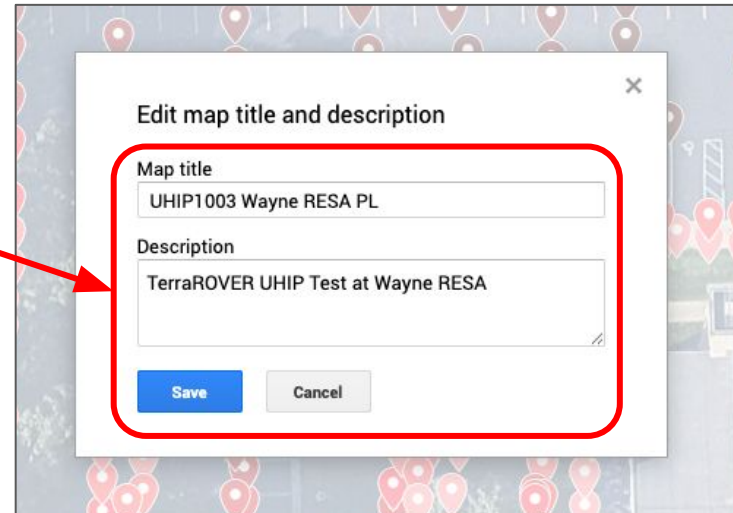
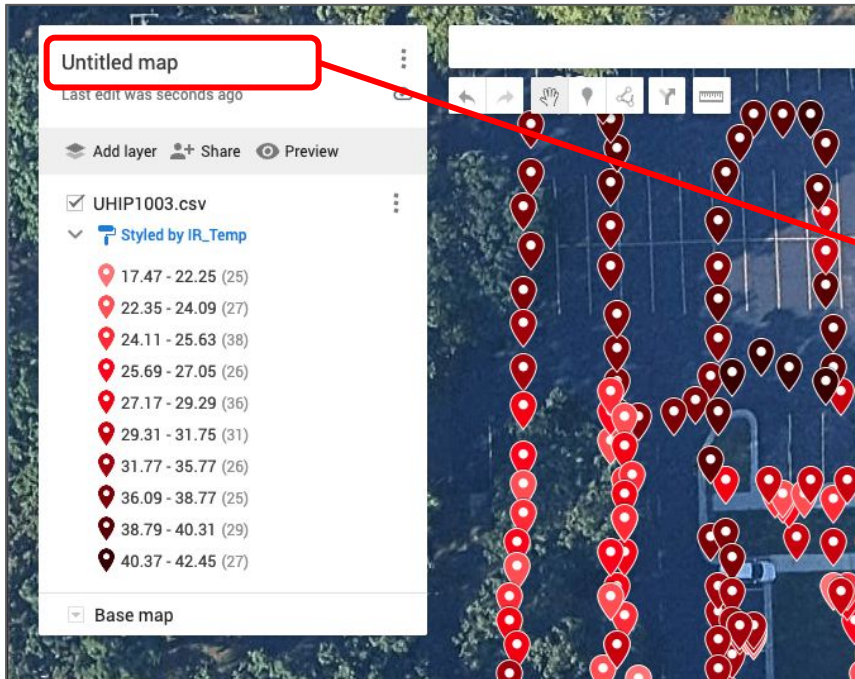


16. Click the down arrow next to Basemap and select Satellite from the dropdown menu

The image shows a composite of three screenshots from the Google My Maps interface. The leftmost screenshot shows the 'Untitled map' sidebar with a list of location data from 'UHIP1003.csv'. A red box highlights the 'Base map' dropdown menu at the bottom left. The middle screenshot shows the 'Base map' dropdown menu open, with a red box highlighting the 'Satellite' option. A red arrow points from the 'Base map' box in the first screenshot to the 'Satellite' box in this one. The rightmost screenshot shows the map view with the data points plotted on a satellite background.

Using Google My Maps to Plot UHIP Data

17. Click on **Untitled map** to open the save window
18. Name your new map, provide a brief description, and click **Save**



Using Google My Maps to Plot UHIP Data



Explore your new map. You can hover over or select an entry in the legend to see the distribution of points in that range. (You can also select multiple entries.) You can also click on any point to see its value.

Try symbolizing a different field - air temperature, for instance. (Select Air_Temp in step 12 instead of IR_Temp.)

Do you notice any correlations between the surface temperature (IR_Temp) and the air temperatures?

What else could you explore with this tool?

