

Campus Map for STEM-X 2 Interns

What's here now?

In this assignment, we'll use Google My Maps to make separate layers for the following.

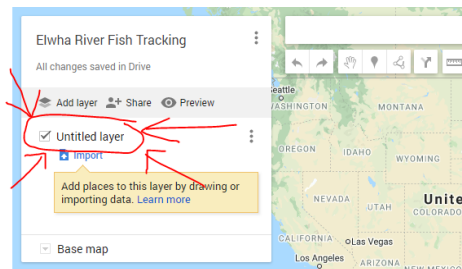
- Lines for individual trails
- Polygons for standing water each month
- Points and/or polygons for noxious weeds, by species
- Points and/or polygons for native plants, by species
-

Open the Map in Google My Maps

- Open the “Stevens Middle School Campus Map”, which you can also find in your Drive -> Shared With Me. If you don't have edit access, please email the teacher.
 - <https://www.google.com/maps/d/edit?mid=18DgLpDB2cvRYLORWz2Na00ppq59kHF0L&usp=sharing>

Task 1: Add Layers

- The map starts with 1 layer. You'll rename this layer then add & rename 3 more.
- Double click “Untitled Layer” & name it Trails.



- Click “Add Layer” 3 more times and name the layers as follows:
 - Standing Water
 - Trash
 - Noxious Weeds
 - Native Plants
- You should have five layers total.
- Note that when you want to add something to a particular layer, you need to have that layer engaged (with a check mark) and the other layers not engaged.

Task 2: Add Lines/Tracks for Individual Trails

- Each individual trail will be a separate line within the “Trails” layer.

Safety for Field Work on Campus

Follow these rules at all times during field work on campus:

- Only go in the field on scheduled days or when you have specific permission.
- Stay on our school campus (see boundaries [here](#) and [here](#)).
- Keep the radio on, set to channel 1, and respond right away if called.
- Keep the safety backpack with you at all times.
- Stay out of mud/water reaching higher than your boots, & remove boots outside.
- All other school and classroom rules apply.

Collecting Trail Data on Campus:

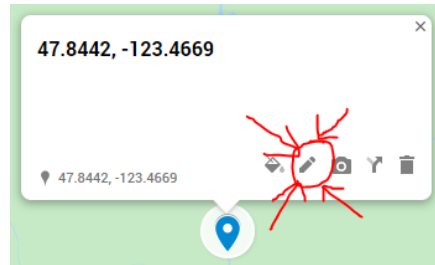
- Go to the spot where your trail begins and turn the GPS unit on.
- Once the GPS unit is connected with enough satellites to give you your position, go to the main menu and go to “Tracks”.
- Use the joystick to turn the Track Log “On.”
- Start walking the trail slowly and without deviating from your course.
- When you reach the end of the trail, meaning when the trail ends or it runs into another trail that you will record separately, click “Save”. Make sure you DO NOT turn “off” the track log before you save the track.
- Use the joystick to rename the track with whatever name you give to that trail.
- Also, be sure to turn “Off” the Track Log until you are ready to do your next trail.
- If you need to move to get to the start of the next trail, push “Clear Log.”

Steps to Follow in the Classroom:

- Make a folder in Drive called Campus Mapping, and share the entire folder, with editing privileges, with dlieberman@gg.pasd.wednet.edu.
- To download the tracks, plug the GPS unit into a Chromebook via USB.
- On the Chromebook, navigate to the GPS unit, find the track(s) you saved, and copy to your Chromebook and then Drive -> Campus Mapping.
- Put all the files for your tracks into this “Campus Mapping” folder.
- If the files are not in .kml format, convert them to .kml with [this site](#).
- In the [Google My Map](#), turn on “Trails” layer, and click “Import” right below “Trails”
- Follow the prompts to import the proper tracks you made.

Changing the appearance of the features in the layer.

- Click the edit option (pencil icon) and title it the name of the trail.



- Click on the paint bucket and change the color.
- Rename the other trails and make all of them the same color.

Task 3: Add Lines/Tracks for Standing Water

- Each individual body of standing water each month will be a separate line within the “Standing Water” layer.

Field Work on Campus:

- Go to a spot where standing water begins and turn the GPS unit on.
- Once the GPS unit is connected with enough satellites to give you your position, go to the main menu and go to “Tracks”.
- Use the joystick to turn the Track Log “On.”
- Start walking the perimeter slowly and without deviating from your course.
- When you reach where you started, meaning the full circumference of the water, click “Save”.
- Use the joystick to rename the track with whatever name you give to that pond.
- Note that the pond in the SW corner of campus is named “Big Boy Pond.”

Task 4: Add Points and/or Tracks for Trash or Oddities

Large trash items and other odd things found in the wetland area will be mapped.

Field Work on Campus:

- Go to a spot where trash or an oddity exists and turn the GPS unit on.
- Once the GPS unit is connected with enough satellites to give you your position, go to the main menu and go to “Mark”.
- Press in the joystick to create/mark a new “Waypoint.”
- Use the joystick to rename the point with whatever name you give.
- Also add in notes about that item.
- If the trash or oddity is larger than just one point, follow the “Tracks” directions.

Task 5: Add Points and/or Tracks for Noxious Weeds and Native Plant Species

Noxious weeds and native species can be mapped as waypoints and/or tracks.

Field Work on Campus:

- Go to a spot where noxious weeds or native plants grow and turn on the GPS.
- Stand in the center of the area of plants, and once the GPS unit is connects with enough satellites to give your position, go to the main menu and go to “Mark”.
- Press in the joystick to create/mark a new “Waypoint.”
- Use the joystick to rename the point with the plant name (use common names).
- In the notes section for the point, write the length and width of the area in meters.
- If the patch of noxious weeds or native plants is larger than just one small area, you can consider following the “Tracks” directions to map the perimeter.

You’ve reached the end of this assignment. Make sure you’ve completed all 5 tasks. Click on the [past sample that earns 4/4 points](#), make sure yours will too, then turn it in.

Grading Rubric for Maps Assignments ([See past 4/4 sample here](#))

Score	4	3	2	1
Detailed and Accurate	All elements of map are full of details and are accurate	Map has $\frac{3}{4}$ of the required details and has some inaccuracies	Map has $\frac{1}{2}$ of the required details and is somewhat inaccurate	Map has $\frac{1}{4}$ of the required details and is very inaccurate

Reference:

<https://www.fws.gov/pacific/Fisheries/youth/documents/Elwha%20River%20Recovery%20Curriculum.pdf>

ArcGIS Online Maps: <https://arcg.is/1OCC9z>
<https://stemx.maps.arcgis.com/home/webmap/viewer.html?webmap=84c2cc66da1a4515ae1665faf75b6461>

<https://stemx.maps.arcgis.com/home/webmap/viewer.html?webmap=21c3d7a8414f4ff18b0347d3aa2d17de>

<https://stemx.maps.arcgis.com/home/webmap/viewer.html?webmap=e1c19095520d4efba0afab3e963a9700>

<https://www.google.com/maps/d/edit?mid=18DgLpDB2cvRYLOrWz2Na00ppq59kHF0L&ll=48.11863143550704%2C-123.468528&z=17>