

Name \_\_\_\_\_

## Mt Hope Topographic glacier feature lab Component II

Task 1 create a data table in excel that you will later import into ArcGIS

- 1) Open excel and create a table with the following columns -- site letters, Lat , Long
  - a. Enter your data under the appropriate columns. Make sure you use ALL the numbers in your coordinates. USE NEGATIVE FOR LONGITUDE Latitude =43.027849 Longitude= -77.56899
  - b. Save to Thumb Drive and/or student account. Make sure you change the file type to a .csv file and name it “your first and last name MT hope”

Task 2 create a map of your data in arcgis

- 2) Go to: <http://arcg.is/2dXchRQ> Click on Modify map (top right)
- 3) Click on Add (top left) Click on Add Layer from File Click Browse Box Select your data file that you created in step 1above. Click Import Your 10 site points should now appear on the digital map.
- 4) For each site you found a glacier feature add a stickpin to the map. To do so click Add (top left) click on Add map notes type the name of the glacier feature in the name box and click create. Click on the stickpin button and then click on the map where you want it. In the pop up box type in the glacier feature in the name box, click close. Repeat for each glacier feature you matched in the field.
- 5) To add your photos to your sites you should have already transferred your photos off your phone to an internet photo site or emailed them to yourself. Click on Add (top left) Click on Add Map Notes. Name your photo and click create. Click on the stick pin and place it on the map on the corresponding site. Go to your photo and right click to get the URL address. Copy and paste it in the image url box and again in the image link url. Repeat for each site you would like a photo to.

Task 3 analyze your data

- 6) copy your elevation data from your field data chart to the chart below.
- 7) Zoom in and/or out on the map and record the elevation of site each site on the chart below.
- 8) complete the last column of the chart

Site	Elevation of site recorded in the field	Elevation of site according to map	Field elevation is within 50 (+/-) of map elevation. Enter Yes or No
A			
B			
C			
D			
E			
F			
G			
H			
I			
J			

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- 9) Copy your distance data from your field data chart to the chart below.
- 10) use the measuring tool on the map to measure the distance in miles between each of your sites Record the distance between in the chart below
- 11) complete the last column of the chart

Site	Distance between sites recorded in the field	Distance between sites according to map	Field distance is within 10 (+/-) of map elevation. Enter Yes or No
A-B			
B-C			
C-D			
D-E			
E-F			
F-G			
G-H			
H-I			
I-J			
J-A			

- 12) Print your map.
- 13) Answer the questions below on a clean piece of paper.
- 14) turn in the following stapled together
  - Field data chart
  - Data charts above (elevation and distance comparison)
  - Printed map
  - Discussion questions answered below on a clean piece of paper

**Discussion Questions:**

- 1) Describe how might the topography of the Mt. Hope Cemetery appear if glaciers were never covering the area?
- 2) What was the average speed (rate of change) that you walked from start to finish (“A” back to “A”) (Total Distance / Total Time) [show math work]
- 3) What is the slope (Gradient) between site A and B? [show all math work]
  - a. Think back to walking between site A and B, what this flat land, a small hill , a large hill?
- 4) Choose another two points on your map that you remember having a larger hill or slope. Calculate the gradient between these two points. Make sure you state which two points you choose and show your math work
- 5) The Genesee river is just west of the cemetery which direction does the water flow in the river? Explain how you know this.