GPS Activity Worksheet

* 1. Our group will map \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ because we are interested in \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_
  2. Teacher approval (get signature) \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_
  3. Our trip name is: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_
  4. Use the space below to draw a data collection chart and fill it in.

**The Trimble “Outdoor Navigator” (smart phone) and “Mytopo Maps” (iPad)**

**Step One: Starting a Track**

1. Go to the Map Screen

|  |  |
| --- | --- |
| iPhone/Android   * 1. Pull the “TRACK” switch down to “ON”   2. Press the text box for a new name | iPad   1. Press the “My Trips” tab 2. Press the “New” button |

1. Enter a name that makes sense for your track, then press “START”
2. You are now saving data to the phone

**Step Two: Mark a Waypoint**

1. Find your first feature
2. Stand still and wait for two minutes to get a better “fix” on your position!!
3. Marking a point (from the “Map” screen)

|  |  |
| --- | --- |
| iPhone/Android   * 1. Press the “Mark” button   2. Choose “WAYPOINT” or “PHOTO”   3. Enter a name for the point/photo | iPad   1. Press the “Drag and Drop” button   (bottom center) and drag the marker to the blue dot (your position)   1. Press “Add Media” to add a photo 2. Name the waypoint |

1. Note the latitude and longitude on your data sheet
2. Press “SAVE”

Walk to your next feature that you want to map

1. Continue to mark the rest of the features that you are mapping
2. Make sure to record the Latitude and Longitude of each data point on your data sheet.
3. Make sure each data sheet entry has the name of the feature.

**Step Three: Finishing a Track**

1. Go to the Map Screen

|  |  |
| --- | --- |
| iPhone/Android   * 1. Pull the “TRACK” switch down to “OFF”   2. Goto the “HOME” screen and  1. Press the “Stop” button 2. When asked, close the trip | iPad   1. Press the “My Trips” tab 2. Press the “Close” icon 3. Press the “Sync” icon |

1. Elect a sharing option (you do not need to share) and press “CONTINUE”
2. Your track is now available through the Trimble website with your login

GPS Mapping Activity HomeWork

* 1. What is the approximate latitude and longitude of WHS?
     1. Latitude \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_
     2. Longitude \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_
  2. What differences do you observe between the Trimble map and the Google Earth map? [scale bar, grid, north arrow]
  3. Which map is better for communicating the story that you choose to map? Why?
  4. Write one paragraph about what you chose to map and why you chose it (why is it important? How can this information be used?).

**Making a Map**

1. Login to Trimbleoutdoors.com
   1. Open a web browser (Internet Explorer, Google Chrome, Mozilla Firefox, etc.)
   2. Goto: <http://www.trimbleoutdoors.com/> (you can google “trimble outdoors”)
   3. At the top right of the page, click the “Login” button and enter the username and password that your teacher gave to you.
2. Download your track to the computer
   1. Once you are logged in, at the top right of the page click “My Dashboard”
   2. You will see your track name, date recorded, distance and other information at the top of the page (you will have to look through a list).
   3. On the same row as your track name and at the far right of the row, click the “Options” menu and choose “Download.”
   4. Click “KML,” you will notice that the download starts. Click the “Close” button.
3. View a simple map in the web browser
   1. From your “Dashboard” click on the link for your track name
   2. You will see a simple map in the web browser
4. Place the map in Microsoft Word
5. With the web browser active (front window), press [ctrl][shift][prnt scrn] (Windows) or [cmd][shift][3] (Mac) all at the same time to copy the screen image to the computer’s memory.
6. Open Microsoft Word and in the new document go to the “Edit” menu and choose “paste.” The map should appear in your document.
7. Click on the image and then select the “Picture Tools/Format” tab in the menu ribbon at the top. Find the “Crop” tool and click it. Black guides will appear on the image.
8. Click and drag to adjust the guides on the image until you have only the map image (not the rest of the screen). Press “Enter”
9. Add a title
10. Open the map in Google Earth
11. With the web browser active, double click the downloaded KML file from step 2.
12. The map will open in Google Earth. From the “View” menu select “Grid.”
13. Click on your Waypoints. Double check that the Latitude and Longitude for your waypoints and photos match the values you recorded on your data sheet.
14. Change the appearance of your map in Google Earth
15. Experiment with the properties of the folders “Points” and “Tracks” in the “Trimble Outdoors Trips” object (in Temporary Places).

1. Place the Google Earth map in Microsoft Word
2. Use the instructions from step 4 to place the Google Earth map in Microsoft Word.