



# Assignment 1

In this assignment, we'll be covering two essential skills: (1) Effective note-taking and data recording, and (2) Measuring and estimating. These exercises are presented below by week. All of the exercises are mandatory to fulfill the requirements of certification for the Environmental Field Skills program.

## Effective Note-Taking and Data Recording

Before going out in the field, create a title page in your field book for this assignment. Refer to the online course for an example of what the title page should contain. Your title page should include:

- **Project Name:** Determine your own project name for this exercise. It should be descriptive so you know what is being done just from the title.
  - **Date:** Provide the data of the field work. Spell out the month to avoid ambiguity in using only numbers for dates.
  - **Location:** Describe the location of the site as best you can. Where is it? If someone else had to get to it based on your notes, how would you describe its location. Based on your description, would I be able to find it on Google Maps or Google Earth?
  - **Equipment:** List any equipment you will be using during the day
  - **Tasks:** For this exercise, your task is "data collection and development of scale map of an area."
  - **Crew:** List the names of the people you are working with.
  - **Weather:** On the title page, describe the weather according to the four components: temperature, precipitation, cloud cover, wind (direction and strength).
  - **Work Hours:** include your start time and end time for the day of doing this work.
- based on your notes, how would you describe its location? Based on your description, would I be able to find it on Google Maps or Google Earth?
  - Determine hazards. What potential hazards do you see upon looking around?
  - Describe what you see. Is it level ground? Steep? Forested? Grasses? Are the trees deciduous or coniferous? Can you identify any of the species there? What are the principal features on the site? How large would you estimate is the area you are interested in? What shape is it?
  - Set the timer on your phone for 15 minutes. Wander around in the area until your timer goes off, looking carefully at all around you. The ground, the trees, the vegetation. What else do you see when you look more closely? Evidence of wildlife? Of human presence (litter)? Record those in your notes.
  - Draw a sketch map while in the field of your area. Include the required parts of a map – title, legend, approximate scale, north arrow. Label the features of the area you want the reader to notice.
  - Photo-documentation: Photograph the site so the class will be able to see it. Share the photograph on PadLet. What are you showing in the photograph? What do you want to convey to the class? Photograph any unusual observations (e.g., bones, skulls, tracks, ...).

Go from where you live to somewhere nearby that has a few interesting features, such as a bridge across a stream, a clearing or meadow, a city park,... some place with a feature of interest.

- On the title page, describe the weather according to the four components: temperature, precipitation, cloud cover, wind (direction and strength).
- Describe the location of the site as best you can. Where is it? If someone else had to get to it

## Measuring and Estimating

Now we are going to get into more than just the observation, but also the measuring or estimating, and recording of data. There are four short exercises for this.

### (1) Determine your stride length on level ground.

In order to estimate distances we frequently use our stride length and pace out the ground to be covered to determine an approximate length. But for this to work we first need to know our own pace length.

1. Using a field tape or carpenter's tape, measure out 30 m in a nearby field. Mark the two ends by placing objects on each end of the tape or pushing sticks into the ground. Record this distance in your field notes.
2. Using your normal walking stride, walk from one end of the tape to the other, counting your paces as you go. Record your final pace count in your field notes.
3. Repeat this twice more for a total of three times, recording the number of paces each time.
4. For each of the three trials, calculate stride length as: distance  $\div$  number of paces.
5. Determine the average of the three trials. This is your average stride length on level ground.
6. Record your average stride length in your notes.

### (2) Distance estimation

1. Out in the field, visually estimate the distance to an object (building, tree, etc.). Now measure the distance or pace it out and calculate the distance. Record each value in your notes along with a description of what the object is. How did your estimated and measured or paced distance compare?
2. Do this four more times for a total of five distances with both estimates and measures. Choose a variety of distances, some long (e.g., 100 m), some short (e.g., road width) some very small (e.g., length of a leaf).

### (3) Comparison of measured (paced) and estimated values

1. Find a linear feature of fixed width (e.g., bridge, section of road, a garden, playground, or yard...)
2. Create a table in your notes similar to that below. Estimate the length and width of the feature, then pace the length and width, and finally measure the length and the width. You will then have three different measurements for each of the length and the width: estimated, paced, and measured. **Record these in your notes and be sure to include units (m, ft, yards....).**  
How do they compare? Are they similar?
3. Calculate the area of the feature for each of estimated, paced, and measured approaches **Include appropriate units (m<sup>2</sup>, ft<sup>2</sup>, yards<sup>2</sup>...).**  
How do they compare? Are they similar?
4. Assume we need to place 0.3 m of gravel fill on top of the features. What volume of fill would be required?
5. Assume we need to place a fence around this feature to keep people and animals out. What is the total length of fencing we would need to completely surround the area?



## Example table for exercise

Description of feature: \_\_\_\_\_

	Length	Width	Area
Estimated distance			
Paced distance (number paces)			
Paced distance (calculated distance)			
Measured distance			

### (4) Calculation of mean and median

To calculate an average (mean or median) of a collection of items, select something that is common and easily available in for field site. This could be rocks, or trees, or sticks...

1. Measure 10 of these items. It may be the longest dimension of stones, circumference of trees, lengths of sticks. The intention is to get 10 individual measurements.
2. Record these values in your notebook, being sure to note what they are measurements of (length of rock, circumference of tree, length of sticks...). Then calculate the mean length and the median length.
3. Record the mean and median in your field notes.

## Information to be Submitted to NRTG

The intention of the exercises in these first two weeks of the program is to expose you to field notes. And so, the submission requirements for these exercises are photographs of your field notes and data.

**When submitting photographs of field notes, please attach all photographs to a single email. Multiple emails risk being lost in the large number of emails we receive and so ensure all of your submission is attached to a single email. Submit your assignment to [amazon@nrtraininggroup.com](mailto:amazon@nrtraininggroup.com).**

Specifically, the submission requirements for the assignment of Weeks 1 and 2 are:

- List of equipment you will include in a survival kit for your area
- Submission to PadLet of a safety near miss and the lessons learned from it.
- Photographs of freeform notes, including:
  - ◊ Title page
  - ◊ Descriptive notes of site
  - ◊ Sketch map
  - ◊ ONE site photograph (one photograph only) and description of what you are showing in the photograph
  - ◊ Measuring and estimating
    - Determining stride length: number of paces for each of three trials and average pace length for you.
    - Distance estimation: A total of five distances or lengths with both measured/paced and estimated values.
    - Comparison of measured (or paced) and estimated: Completed table of values for length, width, and areas of a selected feature. Comparison between estimated, paced, and measured. Calculation of the volume of fill required to fill the area to a depth of 0.3 m; Calculated length of fence required to surround the plot.
    - Calculation of mean and median – list of ten measurements; description of what it is being measured, calculated mean and median of measurements.