Top 10 Errors Made When Recording and Entering Data… And How to Avoid Them

1. Lack of information about the observer/collector
Identify all of the observers, and if it is a group, include the group name as well (e.g. Ms. Barnett's 6th grade class at Erwin Elementary, or the UVA Kappa Kappa fraternity). If there are questions about the data later, this information will help the lead scientists follow up with you.

2. Incomplete date
Data sheets and field notebooks may be filed for a while before the data are entered. Be sure to include the year in the date. Unless another format is indicated, a clear way to write the date for scientific purposes is Day Month Year (e.g. 20 August 2006).

3. Not filling out the background/environmental information at all
Often we jump right in with collecting data and following protocols and we forget to fill in the background information. Do it first so that you don't forget!

4. Measuring or recording the wrong units
Measure and record the units specified on the data sheet, online data entry portal, or in the protocols. If no units are specified, make sure to record the units you used along with the measurement.

5. Measuring or recording data with the wrong level of precision
Check the precision of any instruments you are using and be sure to record the data using that level of precision. If choices or ranges are provided for data entry, use those choices rather than the exact measurement.

6. Data that just don't add up or just don't make sense
Learn enough about the system you are studying to recognize when you get nonsensical measurements.

7. Guessing
It is okay if you are unable to identify something or unable to measure something. It is better to write/enter "unknown", "unsure", or "unable to measure" than to simply guess at something. Falsifying data (even without a malicious purpose) is considered unethical in the scientific community.

8. Illegible handwriting
If you are recording data by hand (rather than entering it into a mobile application), use print rather than cursive. Make sure others can read the writing. Sometimes copying a data sheet over is the best solution, but beware of errors that you might introduce when copying.

9. Missing data with no explanation

It is okay to have missing data, but you should provide an explanation for why it was missing. Be sure to indicate negative data. For example, if you are surveying small mammals using live traps, you should record the traps that did not catch anything as well as those that did.

And, the most common error...

10. Not returning the data to the proper place or person!

Citizen science becomes a wasted effort if the data cannot be used to answer a research question, monitor the effects of a management strategy, or provide background information on the system under study. Often when citizen scientists do not find the plant, animal, or other thing that they are looking for in the field, they do not return any data at all. A record of the fact that they were out observing at all and the background information from those observations (observer names, date, environmental data) are important pieces of the puzzle and should be treated as valuable data.