Field Notebooks

"If you were to expire on the outcrop, a fellow geologist should be able to pick up your field notebook and continue mapping."
Dr. Dan Lux, Igneous Petrologist, University of Maine

"Bad weather is not an excuse for a bad field notebook. If we only did geology when the sun was shining, we would find ourselves gainfully unemployed in most parts of the world."
Unknown field geologist

These two quotes encapsulate what you need to have in your fieldbook when we are working in South America. It should be complete and clearly written enough that anyone could pick it up and follow your observations and ideas, and you should maintain your standards regardless of the weather conditions, time of day, etc. A notebook becomes your only record of the details you observe in the field.

Some Considerations:

1. Before you start out each day, not the date, the location of your study, the weather, etc. This all helps trigger memories when you are back in the office compiling the data; if the conditions/location changes through the course of the day, keep a running account of this information
2. When you approach an outcrop, take own the following information:
    a. Locate yourself on the map; geologic observations taken without spatial context are, while not worthless, of limited usefulness.
    b. Size/extent of exposure; dimensions of the outcrop
    c. Quick sketch of the entire outcrop, showing the major changes in composition/structure; take a picture of the overall outcrop
    d. Crack off a fresh piece of rock; identify the major rock types; be very descriptive
    e. What structural features do you observe? Are they continuous across the outcrop? Do they vary in spacing and/or size?
    f. Measurements. What can I measure? Bedding, igneous contacts, faults, fracture sets, veins, foliation, mineral lineations? Use that Brunton compass.
3. Make detailed, scaled sketches of the important features you have identified; take photographs with something for scale. Collect important samples. Photograph where each of these samples comes from/how it was oriented in the field.
4. **Separate your observations from your interpretations**. Clearly state when you divert from objective analysis of what is actually there, to subjective synthesis of what you think it means. Geologic interpretations come and go with the times, but good field observations are timeless.
5. Record questions you have after looking at an outcrop. What might you be on the look out for in the surrounding area, based on what you saw here?
6. Plot on your field base map the location and the pertinent features you observed. You should not wait to make your map when you are back in the office. The map should be constructed largely in the field, and then only modified at a later date.
7. Be neat and complete. This is your record of what you observed in the field. Your field book is data. Fieldbooks can even be entered into court as evidence. Do not underestimate the value of a good field notebook.