1. Your laboratory report should have a clear flow of logic.

2. Your sentences should be succinct and clear. Don't try to convey complicated ideas with complicated sentences.

3. Subheadings can help the reader follow your ideas.

4. Each paragraph should make a key point or direct the reader to a particular conclusion. Treat each paragraph as a thought. Starting a new paragraph indicates a new thought.

5. Sentences within a paragraph need to be connected by an obvious flow of ideas. Keep sentences fairly short and to the point. Trying to put too many ideas into one sentence (or into one paragraph) will make it hard for the reader to understand the meaning.

6. If you provide several lines of evidence that all support the same conclusion, don't say “1 is true, 2 is true, 3 is true. The conclusion is…” Help the readers understand why you are presenting them with all these facts from the start; point out how all the lines of evidence support each other. For example, “1 is true, suggesting this conclusion. Similarly, 2 is true, and furthermore 3. Thus, it is clear that…”.

7. Try not to use different nouns for the same subject. Science writing is precise, and no two words mean the same thing, so consistently use the one that is appropriate for your meaning.

8. Passive vs. active voice: You may have been advised in other classes to avoid the passive voice in your writing. (The previous sentence is an example of passive voice; the active version would say, “Instructors in other courses may have advised you to avoid the passive voice.”) In general, use of the passive voice adds unnecessary complexity. However, scientists often use passive voice, particularly when describing experimental protocols. This is not because scientists are bad writers! If we did the experiment well, anyone should be able to reproduce it, and we emphasize that fact by reporting the experiment as if the identity of the experimenter were inconsequential. For example, most chemists would say, “The solution was heated at 100 °C for 5 hours,” rather than “I heated the solution at 100 °C for 5 hours.”

9. Past vs. present tense: Verb tense follows the philosophy described above: we want to convey that the experiment could be done at any time with the same outcome.

† This document contains material from a handout on writing prepared originally by the Smith College Department of Chemistry. See: http://www.science.smith.edu/departments/Chem/Courses/labreports.htm
Therefore, while actions that took place in the past are rightly described in the past tense, results are assumed to reside in the present and are described in the present tense. For example, we write, “The solution was heated at 100 °C for 5 hours”, because that action was carried out at a specific time in the past. However, if you took an infrared spectrum of an intermediate, to describe the spectrum you would use the present tense: “The absence of peaks above 3000 cm$^{-1}$ confirms that no hydroxyl groups remain.”

10. Never start a sentence with a numeral (“2” is a numeral; “Two” is not). When reporting a quantitative amount at the start of a sentence, use the following format: “Salicylic acid (1.00 g) was added to…”. It is incorrect to write “1.00 g salicylic acid was added…”, and it is imprecise to write “One gram salicylic acid was added…”


- “Data” is a plural word; the singular form (for one point) is “datum”. Saying “The data shows that…” is like saying “The people says that…”.
- “Spectrum” is a singular word; more than one spectrum is a group of “spectra”.