Tips on writing the EEG lab report

This is your final lab and I am giving you more independence to write your report. I have listed things that I think would be important to cover. It’s up to you to decide what you want to write about but your report should be complete. I have given some suggestions and specified the results that I want reported.

Things that I think would be important to include in your introduction:
- A paragraph describing the lateralization of the brain with regard to providing necessary background information for understanding the experiment.
- A description of what an electroencephalogram recording is and how it is done.
- A paragraph with a description of how the raw EEG recording is converted into the four classical EEG frequencies, a description of the four classical EEG frequencies and specifically BETA wavelengths, and how EEG recordings are analyzed. For example, the integration of the signal and measuring the area under the curve.
- A paragraph with 2-3 sentence description of the experiment and a hypothesis.

Methods section information:
- Music Stimulus: Slovak Philharmonic Orchestra performing Ludwig Van Beethoven’s Violin Concerto
- Language Stimulus: Female reading SAT words

Results section for the EEG (electroencephalogram) should contain the following data:
- Analysis of Group Area Data – report all stats and post-hoc pairwise comparisons – graph significant results
- Analysis of Group St. Dev. Data – report all stats and post-hoc pairwise comparisons – graph significant results

Things that I think would be important to include in your discussion section:
- Statement of hypothesis outcome with explanation.
- Discussion of the lateralization of music stimulation.
- Discussion of the lateralization of language stimulation.
- Discussion of ways to improve the laboratory experiment next year. This can include ways to fix problems that were encountered, suggestions for additional experimental variables, or comparison / analysis of other variables.

There should be correct in-text references and a complete and correct reference section.

Ten percent (a whole letter grade) of the lab will be based on your scientific writing style including grammar. This is your time to shine and show me that you’ve learned how to write an effective scientific lab report this semester! 😊