

Blog 4 assignment

03-363: Systems Neuro

10 points total (grading breakdown is the same as blog 3)

For this assignment, you will be assigned a group of 3 students (yourself and 2 others). There will be 3 assigned research papers. Each person will choose 1 of the 3 papers to be “primary blogger”, a different paper to be “responder”, and then be the “recapper” for the last paper.

In other words, I will give you Paper1, Paper2, and Paper3. If the group of 3 people are Alice, Bob, and Carol, then some arrangement like this would work:

Paper1: Alice is “primary blogger”, Bob is “responder”, and Carol is “recapper”

Paper2: Bob is “primary blogger”, Carol is “responder”, and Alice is “recapper”

Paper3: Carol is “primary blogger”, Alice is “responder”, and Bob is “recapper”

The groups and papers have been assigned. If you didn’t get an e-mail from me, your group is the same. By 10:00 pm on 4/13, you need to agree who will do each role for each of the three papers and e-mail Teresa (tspix@andrew) your plan for who has each role for each paper.

Over spring break, **everyone needs to read all 3 papers plus the provided review article**, paying special attention to the paper for which they are “primary blogger”. By 10:00 pm on Monday, April 19th, everyone needs to make a 900-1300 word blog post about the paper for which they are “primary blogger”. In that post, they should:

- a) State the overall big picture question
- b) State the hypothesis (narrower than the question, but broader than an individual prediction)
- c) Summarize the background material (2-3 points drawn from the introduction to the paper)
As you summarize key introductory points, notice if anything in the background is different from the paper, for example if a background study uses monkeys but the current study uses mice or if the background study is done in living animals and the current study is looking at tissue extracted from animals.
- d) Summarize the methods used in this paper (manipulation(s) and measurement(s))
- e) State the results that would be expected if the hypothesis were correct
- f) Explain the actual observed results for two measurements (two different figures in the paper)
In your explanation of observed results **you MUST refer EXPLICITLY to at least two different figures in the paper.** Describe what is being shown in those figures in your own words (see note about plagiarism below).
- g) Briefly ask a question for clarification or about one of the methodologies used
- h) Explain the logical connection between the background, the observed results, and the hypothesis (from part b)
- i) Identify one assumption that they needed to make to connect their results to the hypothesis
Usually, the easiest way to find an assumption is to consider the relationship between the background material (from part c) and this study, especially parts of the background that are essential to connecting results with hypothesis.
- j) Ask a follow-up scientific question
For the follow-up experiment, **it MAY NOT relate to the assumptions you identified in part i.** Instead, you need to start the follow-up experiment with fresh eyes, under the idea that they were correct in their conclusions and then describe how you might move on to **learn something new if their conclusions are correct.**

k) Propose briefly an experiment you could do to test the follow up that you have proposed. Explain in 1-2 sentences what you would manipulate, then in 1-2 more sentences what you would measure, then in 3-4 sentences what you would expect to find.

NOTE: use headers for each section so it's easier to make sure you hit all the points and for Teresa to grade.

Over the following week, yes I know it's Carnival week, you should read both of your group members' blog posts and on Tuesday, April 25th, post a 300-500 word response (as a comment) to the one that you are assigned "responder" to. You may also post comments to the other person's blog in your group and you may even re-respond to responses posted about your own blog or comment on other classmates' blogs, but that is optional and won't affect your grade. In your required response, you must:

- a) Discuss the original poster's summary of the paper, including ***either*** pointing out additional data from the paper that support their statement of the overall conclusion ***or*** constructively pointing out an alternative conclusion that the data may support in the paper
- b) ***Either*** answer their clarification/methodological question (part g of the original post) ***or*** agree with them that you don't know the answer to it.
- c) Discuss the logical connections described in parts h & i of the original post, including whether you agree that the assumption your group member identified is really an assumption that was made or something that is actually supported in the data. (For example, your group member might have said that they assumed that monkeys' visual cortex is the same as rats' is an assumption in some respect, but you might think that in fact their data prove that the two species are similar. The point here is NOT to figure out whether a particular idea is an assumption or a conclusion as much as to have a discussion about what counts as an assumption vs. a conclusion.
- d) Suggest one ***other*** follow-up scientific question ***OR*** suggest a variation on the ***method*** proposed by the original poster, or suggest a different method that could answer the follow up question your group member asked in part j of their post.

The "response" is due by 10:00 pm on April 25th.

On April 26th, you need to read all of your group's posts and responses. You should continue the responses and comments online and look for comments from Dr. Brasier and/or Teresa.

In class on Thursday, April 27th, you will have 20-30 minutes to meet with your group and discuss the 3 papers and the blog posts and discussions. In order to make this time effective, it is ***essential*** that everyone have read all 3 papers and all the blog posts & comments for your group before that time. The goal for that time is to come up with a group summary of what you discussed about each paper and what unresolved questions you still have.

That night, 4/27, by 10:00 pm, the "recapper" for each paper needs to post a 100-200 word summary of the entire discussion from online and from in class, also as a comment on the original blog. This includes what different perspectives were raised about the paper, what consensus you reached about the paper, what questions were raised and answered, and what questions were raised but still remain unanswered.

Again, additional responses and discussions within the blog forum are encouraged, but optional.