

LB145 F14

The Avida-ED Poster – Guidelines and Expectation for the Poster and its Presentation

A. Overview

Your team will make a poster to share the results of your Avida-ED research project with the rest of the class and with a group of scientists (students and faculty) at the BEACON Center for the Study of Evolution in Action in BPS on Nov. 21, 2014. A formal poster presentation happens when the author of a poster stands next to that poster and explains the content of their poster to passers-by during the poster session. Authors also answer questions from viewers about their project. This is what you will do at the LB 145 Avida-ED Poster Session at the BEACON Center!

The guidelines for preparing your poster are listed below. Use these as a guide as your team prepares its poster. A scientific poster is concise. This format uses less text and more figures, pictures, and tables to relay information to the audience than is found in a scientific paper. Often, authors will use clear bulleted lists rather than complete sentences and paragraphs to get their message across.

You are encouraged to bring a complete digital draft of your poster to lab and/or office hours to get feedback from the teaching team so that you can get feedback and make revisions before printing your poster. Your team will need to work outside of lab to complete the poster, get it printed, and prepare for your oral presentation at the BEACON Center

Poster Guidelines

The following items and sections are required elements for your poster. Please read through each item carefully. The Instructions for Authors (pp. 97 – 107 in The Lab Manual) pretty much hold true for all aspects of the poster. However, let us know if you have any questions about any aspect of these.

1. **TITLE:** should be concise and catchy – besides the overall design of your poster, it is the first thing that viewers usually look for to decide whether they should bother reading your poster.
2. **AUTHORS:** first name followed by last name, in alphabetical order by last name.
3. Your poster **NUMBER:** each team will be given a number that needs to be included in the upper right-hand corner of the poster – this number is for identification purposes.
4. Your **AFFILIATION** (aka contact information):

**Lyman Briggs College, Michigan State University
LB 145 Introductory Cell and Molecular Biology, Section 001 (or 002)**

5. **ABSTRACT:** Your poster will include an abstract, much like you did in LB144. The abstract will consist of: 1) the authors, 2) the poster title, and 3) a brief (<250 words) abstract of the poster. Here is an example abstract:

Murkey, L., N. Seymour, and A. Sylvester. Behavioral differences between male and female *Anas platyrhynchos*.

We observed individual and group behavior patterns of Mallard ducks (*Anas platyrhynchos*) to study tendencies and relationships between males and females. We tested the hypothesis that male Mallard ducks will spend more time eating and interacting with other ducks and less time grooming compared to female Mallard ducks. Mallard duck behaviors were observed along the Red Cedar River on the Michigan State University campus near Spartan Stadium. Nine observations were made over a three-day period during which both male and female ducks were studied separately for twenty minutes each. For all observations, we recorded time spent eating, grooming, and interacting. Our results showed that male Mallard ducks spent more time interacting with other ducks (mean = 12.3 ± 1.3 as compared to 8.9 ± 2.2 min, $p = 0.03$), while females spent more time eating (22.7 ± 4.1 as compared to 12.2 ± 3.6 min, $p = 0.003$). On the other hand, time spent grooming was the same for both males and females (32 ± 7 and 30.5 ± 5 min, $p = 0.09$). This research adds support to the idea that sex plays a role in determining duck behavior.

6. **INTRODUCTION:** this is where you communicate to the reader your research question and why you find it interesting. Briefly summarize what is known or has already been done with regards to your topic. Don't forget to cite your sources of information. Then, formally state the hypothesis that you are testing with your research and describe the general approach that your team took to do so. Finally, describe what you predicted that you'd find, given your team's hypothesis and experimental framework.
7. **METHODS:** this should be a brief description of the methods that your team used to collect your data. Include here a description of how you summarized your data and the statistical framework used to analyze them, including how you interpreted results ("such-and-such a result was interpreted as providing support for our hypothesis").
8. **RESULTS:** state what your team found, including statistical values associated with the analyses; must *also* include Figures and Tables that summarize results (DO NOT include tables of RAW data; tables that summarize raw data are good though). Refer to these tables and figures in the text of your results section.
9. **DISCUSSION & CONCLUSIONS:** This is where you summarize and interpret your results and discuss them in terms of your original questions/hypotheses and expectations/predictions. Do your results support or not support your hypotheses? Explain your reasoning. Given that, what has your team concluded? Also, in the discussion, place your study into the broader context of evolutionary biology by

describing one analogy of your Avida system to a biological system. Finally, describe what came out of your study with respect to what your team might want to look at next!

10. **REFERENCES:** Use the **Instructions for Authors** to format your full citations, however, you may shorten them for the poster by:
- a. within the text, using a numbering system that corresponds to your references section.
 - b. in the reference section, omit the article title.

Poster Formatting Requirements

Your team will need to make its poster in PowerPoint (changing the size of the layout in Page Setup to custom with size = 36 horizontal by 48 inches vertical or 48 horizontal by 36 vertical) and then go to the MSU library and print your poster (full color poster). **[Please note: your team's poster printing costs will be paid for (up to \$25) by the Avida-ED project.]** Use of a white background, short bullet points, large fonts, colorful graphics and pictures that visually explain your project will make for a better poster. Generally speaking, font size should be as large as there is space for and nothing should be smaller than 20pt (usually 20pt is reserved only for the references and Table or Figure legends – everything else should be much larger; see below), or else it will be too difficult to read. Below are font ranges to shoot for, everything you will notice is relative in size to other things, so keep that in mind when you are making adjustments. The main point is to be consistent in your sizing. As far as font style is concerned, pick fonts that are easy to read.

Font Sizes:

Title: between 60-72 pt

Authors: between 50-60 pt (smaller than title)

Affiliation: between 30-40 pt (smaller than authors)

Section headings: between 30-40 pt (same size or larger than the affiliation)

Body text: between 24-32 pt (smaller than section headings)

Figure legends: no smaller than 20 pt

References: no smaller than 20 pt

Grading Criteria for Poster Presentations

Content of Poster (10 points)

- The Abstract is complete.
- The Introduction describes the background biology of the system and why the study is of interest.
- The Introduction includes a strong formal statement of the hypothesis being tested.
- The Introduction describes, in general terms, the experimental methodology being employed to test the hypothesis.
- The Introduction describes the predicted outcome(s) of the experiments and how these results will be interpreted.
- The Methods section is complete, with methods clearly explained.
- The Results of the experiments and analyses are all present, with parenthetical references to relevant figures and tables.
- The Discussion and Conclusions section described whether or not the data supported the hypothesis being tested, and what this means.
- The Discussion and Conclusions section describes an analogy to a biological system.

Figures and Tables (5 points)

- The tables and figures selected for the poster form a logical set. They are interesting, relevant, and informative.
- The tables and figures are clear, legible, and easy to understand.
- Each figure and table has a complete and well-written legend (including a title).

Appearance of The Poster Itself (5 points)

- The poster is printed and on the poster board.
- The poster is well organized.
- The poster is nicely balanced with respect to text and graphics.
- The poster is aesthetically pleasing.

Presentation of Your Poster (5 points)

- Details TBA.

Peer Evaluation of Another Poster (5 points)

- Details TBA.