NSF STEM/Choose Ohio First Success in Math Programs
Scientific Research Poster Tips
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When constructing your poster, you should always think: "How can I best tell this story?" The poster is something to point at. Realize that most people will not read the entire poster, so plan accordingly. You do, however, want to be ready to answer the question "So tell me about your research?" by pointing at appropriate parts of your poster. You also need to be ready to answer with more or less detail according to your audience's interest.

Below is an outline of the parts of a poster. You may not use all of them, depending on your story.

You will want to lay out your poster in a way that makes it easy to understand and visually appealing. It should encourage, not discourage, the audience to read your poster carefully. Remember you are telling a story to your audience. Try to make it captivating.

Posters generally flow from left to right and top to bottom. Generally someone will start with the title, then go to the top left corner of the poster. They'll continue reading down a column and then start at the top of the next column to the right, eventually (if they get that far) ending up in the bottom left corner. Your story should progress along this path.

PowerPoint/Typesetting Tips

Most people use PowerPoint or Keynote to make their posters, although you may use any program you wish. If you need to typeset equations, you might consider using MathType (an equation editor that works with many programs) or TexPoint (a LaTeX add-in for PowerPoint). Both have 30 day free trials available.

- The poster size for this poster session is 36"x48". Make sure you set this size before you start to create the poster.
- You might want to create the pieces of your poster as separate slides and then copy them over to the poster itself.
- You can group things so that you can move them around together
- The font for the poster should be Arial or Helvetica. Use a font size that can be easily read from 3 feet away, usually 32 point works well (no smaller than 24 point). The title should be larger, 60-65 point. Section titles should also be larger than the regular text though not quite as large as the title font.
- Use color to grab attention, but be careful not to make it too busy.
- **It is important to have sufficient contrast between the lettering color and the background color.** Be careful not to put "dark" lettering on "dark" background. One way to do this is to have white boxes with black text on top of a colorful background.
- Use bold font for titles of figures so that they can be read quickly. The title of a figure is a "mini-conclusion" so use descriptive figure titles as much as possible.

- Generally posters with color and with figures or photographs grab attention. This does not mean use every color in the rainbow but do consider how best to use color and images to entice people to look at your poster. Be careful not to sacrifice legibility.
- Posters entirely filled with text can be hard to read and will be less likely to grab the audience's attention. Highlight your work by including a few well-chosen figures and/or pictures to illustrate your methods and/or results to the audience.
- When resizing something make sure that you resize proportionally by using the stretch tab at the corner, not the horizontal or vertical stretches.

Parts of a Poster The poster should include the following sections:

- Title. This should be large (able to be read from across the room), try 60-65 point font.
- Acknowledgements.
  - Logos of sponsors. You should have a Kent logo as well as the COF logo. This generally goes at the top of the poster. There is a file on Blackboard with the logos in them. Make sure it is a high resolution jpg if you download them from the web and you keep the same aspect ratio when you rescale.
  - You should acknowledge somewhere on the poster anyone who assisted you with equipment or significant time or assistance.
- Author list. A list of authors should be below the title, generally in a slightly smaller font, say 48-52 point. For our groups, you should list the authors in alphabetical order. In some fields you will find the standard is to list them in order of contribution importance or some other scheme. For our projects you should list your faculty advisor below the authors, if there was someone who worked with your group. If you have people from different institutions working on a project, you should specify who is from which institution.
- Body. It may include some or all of the following parts, depending on your project.
  - Abstract. This is generally written for your application to participate in the poster session. It is usually put into some sort of program for the attendees. You may choose whether or not to include it on the poster itself. It is typically a single paragraph (generally 150-200 words) that gives the reader a summary of your entire poster/research project. Scientists will often read the abstract even if they don't read the poster in its entirety, so your abstract should be clear, concise, and communicate the 1-3 most important points about your research.
  - Introduction. The background necessary to understand what your research project is and how the information we learn from it will influence the broader scientific community. This section should answer questions like: How does your work fit into the bigger picture of what we know about the field? What previous results

does your research depend on? At the end of this section the audience should be able to understand why you studied this problem and what questions you aimed to answer.

- Methods and Results. These may be a combined section or two separate sections, depending on your project. Separate if only using 1 or 2 methods; combine if using lots of methods. Consider using bullet points. Sometimes the methods can even just be part of a figure legend rather than a separate paragraph.
- Methods. This section explains the steps you have taken (or will take) in the course of your project, answering questions like: What observations or experiments or simulations does your data come from? What hardware or software are you using in your analysis? This should be just an overview, not extensively detailed. Focus on the approach taken and why it is appropriate to the questions being asked. Note that in a research paper you would provide more extensive detail, but not on a poster. Be brief. Ask your advisor if unsure about how much detail to include.
- Results. A presentation of the raw results of your experiments or calculations. Data with statistics should be presented in easily understood tables, graphs, and/or images. Text should explain that data appears in which tables/graphs/images and which experiments generated the data.
- Discussion. A summary of what you have accomplished or learned in the course of your research. Your project may still be a work in progress; in this case, you may want to present possible outcomes of your work, and explain the work you will do in the future to allow you to distinguish between these outcomes. Interpretation of the data and conclusions belong in this section, not in the results section. This need not be a long section.
- Future Directions. You may want to include a section about what you intend to do next related to the topic of the poster.