

6. RESEARCH POSTERS II

100 Points

As explained in lab exercise two, communication of scientific experimental results is a critical part of the scientific method. As part of lab exercises two, three, and four, you have collected much of the information necessary for assembling a scientific research poster. The objective of this exercise is to design a poster layout for all of your information, and ultimately, to print your poster and display it on the third floor of the Science Building.

YOU SHOULD BE ABLE TO:

- Create a professional-looking poster that communicates the results of our field experiments in a clear, concise and attractive fashion;
- Create a poster that includes all the information expected in a scientific communication, whether the communication is in the form of a poster, written paper, or oral presentation.

PROCEDURE

Your poster dimensions should be 42 inches high and approximately 50 inches wide. One side of the poster cannot exceed 42 inches because that's the width of the poster paper. The other side may range from 45–56 inches depending on the amount of information you have and how you lay-out that information. The length may not exceed 56 inches.

Create your poster in PowerPoint as a single slide. In PowerPoint, go to the *Design Tab*. On the left side is a pick for *Page Setup*; click on that. Enter your width and height in inches. Start with 42x45 and add inches later if necessary. Enter text by creating text boxes. Remember that text boxes can be reshaped and resized depending on the amount of information in the text box and how the text box fits into your layout. You can write draft text in Word and then copy the text from your Word document and paste it into the text boxes in PowerPoint. Doing this will allow individuals in each team to work on different aspects of the project without everyone trying to add information to the PowerPoint slide simultaneously. You can copy charts in Excel and paste them into PowerPoint. You can move your text boxes and charts around on the slide until you have an organization and layout that you like. To add images that are jpg files to your slide, go to the *Insert Tab*, select *Picture*, and then browse to your team folder and select the file you want to insert. Once inserted, you can reposition the image.

Lab Exercise 2 listed the content required for your poster; make sure your poster includes everything on that list. You should already have much of this content ready. For this exercise, you want to take that content, put in on your poster and design a layout that is logical and attractive. You need to arrive at a consensus with your team members on issues related to the layout – not everyone may agree on the best way to organize information, so find a design that everyone can live with. Once all the content is on the poster, and the layout is agreed upon, each team member should carefully proof read everything on the poster, insuring there are no grammatical or spelling errors, insuring all formatting is consistent, insuring all guidelines have been followed (e.g. formatting of references), and insuring that all the required content is present.

Suggestions for Poster Design

- Divide your poster into several columns; do not run text from one side of the poster to the other – readers will lose their place if you do this. The one exception is with the poster title – the title can stretch across the entire width of the poster. If columns are too restrictive for you, can organize the information in blocks, but be sure the reader can follow the blocks of information in a logical order.
- Text must be large enough so a reader standing five feet away from the poster can easily read the text and charts. A recommended *minimum* text size is 20 points. Text on charts and graphs also needs to be legible, but you could get by with *slightly* smaller text on the graphs. Do not shrink the text so you can cram more information onto the poster – decide what’s most important and use concise language to fit the information in the available space. On the other hand, do not use excessively large text so you can fill up space without much content. The content matters – too much is almost as bad as too little.
- Another way to make text easier to read from five feet (in addition to increasing the font size) is to increase the paragraph line spacing from single-spacing to something slightly more than that. For example, if you use 20-point type, you might set your line spacing to exactly 24 points.
- In general, san-serif fonts (e.g. Arial, Calibri) are easier to read from a distance than serif fonts (e.g. Times New Roman).
- You can use different font faces and sizes to distinguish different types of content, such as the poster title, section headings, body text, and figure captions. But, don’t use too many different font faces/sizes – this makes the poster look like it was just thrown together without any thought to its design.
- There should be a strong contrast between the text color and the background. It is OK to use images as a background rather than a solid color, but if the background image is very “busy” the text will be hard to read. The text must be easy to read.
- Select a color theme for the poster and stick to it. Color variation is fine, but you don’t want a circus of colors.
- You can use borders or variations in background colors to help organize the information on the poster so that readers know what text goes with which graphics. For example, text boxes might have a different background color than the overall poster background.

Look at the posters currently hanging in the hallways to get some ideas. Keep in mind that some of these posters have a better design than others, just as some posters have better content than others. Ultimately, you want readers attracted to your poster – the design (along with the title) will pull readers in. Once you have their attention, the content is what will hold their attention.

ABBREVIATED GRADING RUBRIC FOR POSTER

CONTENT & SUBJECT KNOWLEDGE 40%	A: (10-9 pts) Excellent	B: (8-7 pts) Good	C: (6-5 pts) Satisfactory	D: (4-3 pts) Unsatisfactory
<ul style="list-style-type: none"> • Project definition • Fit in scholarly framework • Information accurate & relevant • Methodology • Analysis & results • Conclusion 	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>			
Collegiate level				
Amount of information				
ORGANIZATION 15%	A: Excellent	B: Good	C: Satisfactory	D: Unsatisfactory
<ul style="list-style-type: none"> • Logical, interesting sequence • Existence of visual hierarchy • Division into component sections • Flow between columns/frames 	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>			
WRITING 20%	A: Excellent	B: Good	C: Satisfactory	D: Unsatisfactory
Grammar & Composition <ul style="list-style-type: none"> • Grammar/spelling • Concise, coherent writing • Existence of redundancies 	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>			
Citations <ul style="list-style-type: none"> • All sources cited • Citations complete & correctly formatted • Reference list format & completion 	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>			
VISUAL APPEARANCE 25%	A: Excellent	B: Good	C: Satisfactory	D: Unsatisfactory
Text <ul style="list-style-type: none"> • Readability from five feet • Column width • Title/subtitle stand out • Visual hierarchy of headings/subtitles/body text/figure caption text • Text hierarchy consistently applied • Appropriate use of colors & fonts 	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>			
Graphics <ul style="list-style-type: none"> • Well designed, aesthetically appealing • Catch readers' attention • Neither sparse nor busy • Appropriate resolution • Appropriate for context 	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>			
Overall design & layout <ul style="list-style-type: none"> • Visually appealing; artistic layout, effective use of space • Effective Visual balance • Graphics enhance message; don't interrupt flow • Effective & artistic use of color • Column lengths similar; columns aligned • Background/foreground contrast 	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>			

DETAILED GRADING RUBRIC FOR POSTER

CONTENT/SUBJECT KNOWLEDGE 40%					
	A: Excellent; 10-9 pts	B: Good; 8-7 pts	C: Satisfactory; 6-5 pts	D: Unsatisfactory; 4-3 pts	
Research Effort and Accuracy	Intro	Objective defined clearly and coherently; project importance stated clearly & concisely;	Objective defined poster and project importance stated;	Objective not defined clearly and project importance not stated clearly;	
	Site descr	Accurate and concise description; includes all relevant characteristics (e.g. flow, bed texture, surrounding vegetation);	Relatively accurate description; minor omissions regarding site characteristics don't detract significantly from description;	Wordy and unclear, includes some inaccuracies, misses some important characteristics or includes irrelevant information;	
	Methodology	Appropriate methodology clearly and concisely described; readers could easily replicate methodology;	Appropriate methodology described; readers could likely replicate methodology;	Methodology unclear or not entirely appropriate; replicating methodology would be difficult;	Methodology not described or inappropriate; readers would not be able to replicate methodology;
	Results & analysis	Discussion is clear and concise; addresses and interprets all key points correctly;	Discussion contains minor mistakes addressing or interpreting key points;	Discussion is unclear or contains some big mistakes addressing or interpreting key points;	Discussion missing or fails to address or correctly interpret many key points;
	General	Contains completely accurate information and explanations of key concepts; all information is directly related to project thesis;	Contains no significant errors regarding accuracy of information or explanations of key concepts; all information related to project thesis;	Contains some significant inaccuracies or incorrect explanations of key concepts; contains information not directly related to project thesis;	Contains a lot of inaccuracies or incorrect explanations of key concepts; much information is unrelated/ unresponsive of thesis;
	Potential errors	Discussion is clear and compelling; is based on multiple appropriate scholarly resources; impact of errors on study results is thoughtful and coherent;	Discusses potential errors; discussion is based on multiple, generally appropriate scholarly sources; states impact of errors on study results;	Discussion is limited, unclear, or based on limited sources, not all of which are scholarly; impact on study results superficial or misses important points;	Discussion is limited and unclear and is based on inappropriate sources; impact on study results is irrelevant and misses important points;
	Conclusion	Clear and coherent conclusion; provides good suggestions for future research.	Contains a conclusion; provides suggestions for future research.	Conclusion is somewhat incoherent; provides limited or contrived suggestions for future research.	Conclusion is missing; no suggestions for future research.
Collegiate Level	Level is consistently appropriate.	Level is generally appropriate.	Portions too elementary or sophisticated.	Consistently too elementary/sophisticated.	
Amount of Content	Sufficient content to fill allowed poster space.	Slightly too much or too little information; poster looks a bit cramped or a bit bare.	Too little or too much information crammed into allowed space; looks cramped or bare.	Too little/too much information crammed on; looks really cramped or really bare.	
ORGANIZATION 15%					
	A: Extremely well organized; flows well; 10-9 pts	B: Generally well organized; flows; 8-7 pts	C: Somewhat organized; awkward flow; 6-5 pts	D: Not organized; does not flow; 4-3 pts	
Sequence	Information presented in a logical and interesting sequence	Most information presented in a logical sequence	Sequence of information not always logical or interesting;	Sequence of information illogical and uninteresting;	
Visual hierarchy	Clear visual hierarchy to information;	Information has a visual hierarchy	Unclear visual hierarchy	No visual hierarchy to information	
Sections	Component sections (e.g. introduction, methodology, etc.);	Information is divided into component sections (e.g. introduction, site description, methodology etc.	Information not always clearly divided into sections (e.g. methodology mixed in with introduction)	Information not divided into component sections (e.g. introduction, methodology, etc.);	
Information flow	Flow from column to column or from frame to frame and easy to follow; it's obvious to a reader where to go and what to read next.	Flow from column to column or from frame to frame and between graphics and text is clear to follow; reader can determine where to go and what to read next.	Flow from column to column or from frame to frame and between graphics and text is some-what confusing; reader not always sure where to go or what to read next.	Flow from column to column or from frame to frame and between graphics and text is confusing; reader does not know where to go or what to read next.	

WRITING 20%					
	A: Excellent 10-9 pts	B: Good 8-7 pts	C: Satisfactory 6-5 pts	D: Unsatisfactory 4-3 pts	
Grammar/Composition	No grammar or spelling mistakes Concise sentences; bulleted points may be incomplete sentences but readers can clearly understand the point No redundant information All sources are cited;	Minor grammar spelling mistakes; errors insufficient to distract reader Some wording is less than concise; bulleted points longer or shorter than necessary, but still understandable Some minor redundancies Most sources are cited;	Significant grammar and spelling errors Writing is wordy and unclear; bulleted points so wordy or so terse reader has trouble understanding the point Multiple redundancies Many sources are not cited;	Consistently poor grammar; multiple spelling errors Writing is incomprehensible Lots of redundant information.	
Citations	All citations complete and properly formatted; Reference list complete and properly formatted using Department citation style.	Most citations complete and properly formatted; Reference list complete but includes minor formatting errors.	Many citations incomplete or improperly formatted; Some items missing from list; list includes minor formatting errors.	Citations missing or incomplete and improperly formatted; List incomplete; contains multiple significant formatting errors.	
VISUAL APPEARANCE 25%					
Text	Combination of font, text size and line spacing easy to read from five feet; Body text is divided into columns or blocks of text narrow enough for readers' eyes to move easily from the end of one line of text to start of the next line of text; Title (and subtitle) is significantly larger or different from poster content; clearly attracts attention; A clear visual hierarchy of headings, subtitles, body text, and figure caption text exists (based on font, text size, color, alignment, and/or spacing); Text hierarchy and formatting is applied consistently; Appropriate and artistic use of colors and fonts for emphasis or to aid organization of information.	Combination of font, text size and line spacing can be read from five feet; Body text is divided into columns or blocks of text that are narrow enough for a reader's eyes to move from the end of one line of text to the start of the next line of text; Title (and subtitle) is larger or different from poster content; attracts attention of most readers; Visual hierarchy of headings, sub-titles, body text, and figure caption text exists (based on font, text size, color, alignment, and/or spacing); Minor inconsistencies in text hierarchy/formatting; doesn't detract from appearance/comprehension; Mostly appropriate use of colors and fonts for emphasis or to aid organization of information.	Combined font, text size & line spacing somewhat difficult to read from five feet; Body text is divided into columns or blocks of text that are too wide; difficult for reader's eyes to move from the end of one line of text to the start of the next line of text; Title (and subtitle) does not stand out significantly from content; title doesn't attract much attention; Visual hierarchy of headings, subtitles, body text, etc. is unclear; too little/too much variation in font face, text size, color, alignment, spacing; Inconsistent application of text hierarchy/formatting; detracts from poster appearance and comprehension; Minimal color/font variation; or, slightly too many colors/fonts, which detracts from organization.	Combined font, text size & line spacing difficult to read from five feet; Body text is divided into columns or blocks of text that are too wide for a reader to keep their place as their eyes move from line to line; Title (and subtitle) does not stand out from poster content; title does not attract attention; No visual hierarchy of headings; subtitles, etc. exists; no variation exists or variations exist but do not reveal a hierarchy; Text hierarchy not evident; detracts significantly from poster appearance and reader comprehension; No color/font variation – poster looks boring, or too much color/font variation— poster looks like a circus.	

VISUAL APPEARANCE CONTINUED			
Graphics	<p>Most graphics are well designed and aesthetically appealing based on standard accepted formats; some graphics contain minor design issues</p> <p>Graphics draw most readers in by catching their interest and attention</p> <p>Graphics are somewhat sparse/busy</p> <p>Most graphics/images/maps are at an appropriate resolution</p> <p>Most graphics are appropriate for the context</p> <p>Poster is visually appealing and attracts attention of most readers due to appropriate layout of graphics, text and white space; space used effectively; visual flow of information is clear;</p> <p>Minor inconsistencies in visual balance; insufficient to detract significantly from poster appearance;</p> <p>Graphics are interspersed with text; most graphics do not interrupt flow of text; graphics enhance message of poster;</p> <p>Color is used to attract readers and to emphasize key points or headings;</p> <p>Most columns of similar length are aligned at the top or the bottom;</p> <p>Contrast and differentiation exists between background (whether a color, pattern, or image) and foreground; background doesn't significantly detract from readability of information.</p>	<p>A significant number of graphics are poorly designed or are not aesthetically appealing based on standard accepted formats; or some graphics contain major design issues</p> <p>Graphics catch the attention of some readers</p> <p>Graphics are very sparse/busy</p> <p>Many graphics/images/maps have an inappropriate resolution</p> <p>Many graphics are inappropriate for the context</p> <p>Poster only somewhat appealing; less attractive due to some inappropriate layout of graphics, text & white space; space not used effectively; visual flow of information is unclear;</p> <p>Visual balance is not always logical or is inconsistent; detracts from poster appearance;</p> <p>Graphics are interspersed with text but some graphics interrupt flow of text; some graphics don't enhance message of poster or are out of context or inappropriate;</p> <p>Ineffective use of color; does not help attract readers or emphasize key points or headings;</p> <p>Many columns of similar length are not aligned at the top or the bottom;</p> <p>Contrast and differentiation between background (whether a color, pattern, or image) and foreground isn't sharp enough; background detracts from readability of information.</p>	<p>A significant number of graphics are poorly designed, are not aesthetically appealing and/or do not follow any standard accepted formats;</p> <p>Graphics catch the attention of only a few readers;</p> <p>Graphics detract from poster</p> <p>All graphics/imagery/ maps are at an inappropriate resolution</p> <p>Most graphics are inappropriate for the context</p> <p>Poster not visually appealing; does not attract attention due to poor lay-out of graphics, text & white space; space not used effectively; visual flow of information is unclear;</p> <p>No visual balance to components; detracts significantly from poster appearance;</p> <p>Graphics are interspersed with text but graphics interrupt flow of text; many graphics do not enhance message of poster or are out of context or are inappropriate;</p> <p>Colors clash or are completely lacking; do not help attract readers or emphasize key points or headings;</p> <p>Many columns of similar length are not aligned at the top or the bottom;</p> <p>Contrast and differentiation between background (whether a color, pattern, or image) and foreground is weak; information is significantly difficult to read.</p>
Overall design and layout			