



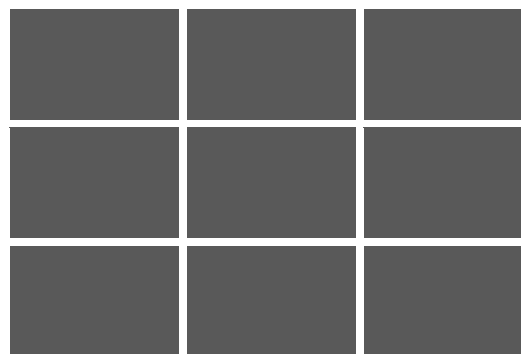
## Astronomy Poster Session Announcement

### CALL FOR POSTER PRESENTATIONS

This announcement calls for contributed scientific research poster presentations describing an original inquiry research study done by a single author. You should complete this research using the skills you have learned and it may not be the same as a previous research study.

#### DATE AND TIME:

**GUIDELINES:** Using nine sheets of 8.5x11” paper in landscape orientation, present a data-based conclusion to a research question you have designed. We recommend creating this poster as nine PowerPoint slides and taping these pages together.



This poster should include the following (note that there may be more than one page for each or some may be combined):

1. *Title Page:* Your name and a **short** title – usually a relevant picture here
2. *Research Focus:* Ask your research question (should be answerable and **large font!**) and maybe briefly (with smaller font bullet points) describe what you expect to find.
3. *Procedure:* Using bullet points, describe specifically how you went about answering your question. Remember that someone needs to be able to reproduce your data.
4. *Data Summary:* Include graphs, tables, pictures, or figures (or a selection thereof) you created to organize your data
5. *Conclusion:* Answer the question -> concisely describe the insight the data provides to illuminate and answer your research question. Basically this is a bullet-pointed answer to:
  - What did you find? (cite EVIDENCE that you have produced) (note that this does not answer WHY you found what you did, just WHAT you found)
6. *Implications:* What physical laws do these data help prove or demonstrate? OR Why does the data look the way it does? (we want a bit of the theory). Note if you use other websites to help here, cite your sources! Some possible additions here:
  - What are some sources of observations bias? (*this one is important!*)
  - How do your findings relate to the world beyond your study? (to your previous knowledge, to bigger ideas, etc.)
  - Based on what you found, what is the next logical question to ask and investigate?

**Use the Helpful Tips on p 2 and the Inquiry Self-Assessment Guide on p 3 for guidance.**

## HELPFUL TIPS AND THINGS TO NOTE:

- You will be presenting your poster to classmates and to instructors during a poster session – keep in mind that people don't like to read tons of words on a poster!!
  - Be succinct
  - Use a bullet-point style (i.e., no complete sentences!)
  - Utilize graphs and images (a picture is worth a thousand words!)
  - Make sure you have information that you can point to if people ask questions about the method or the program (especially if you used a website/program that was not utilized in class – you need to have some reference pictures).
  
- Stylistic requirements:
  - All fonts must be sized 18 pt or greater unless specifically okayed by an instructor
    - Fonts for graphs may be 14 pt
    - Picture source URLs may be as small as 10 pt
  - Slides may not be titled "Graph" or "Data Table" – generate a more meaningful title
  - When displaying a graph, if you chose to have connecting lines, you **MUST** also have data points on that line
  
- Remember that the color scheme can really affect readability (especially if you don't print in color).
  
- Using outside websites to understand the implications of your project is encouraged but you can't use those to carry out your research.
  
- Your fellow students are great resources for how to work with different programs and to bounce ideas off of – the instructors can't be everywhere at once.
  
- Instructors are happy to help you:
  - generate/sharpen your research question
  - help create specificity in your procedure
  - make effective graphs
  - discuss results/conclusions
  - discuss implications

## **Inquiry Self-Assessment Success Guide**

**Use this page to help guide you as you design your research project**

Specific Research Question: \_\_\_\_\_

What list of things might you observe to pursue this research question?

### Step-by-Step Procedure to Collect Evidence:

Is the plan you used going to yield the necessary evidence needed to fully answer the listed research question?

Circle one: Yes | Maybe | No

### Conclusions Drawn from Data Table and/or Results of Evidence

Has enough evidence been collected for this specific research question?

Circle one: Yes | Maybe | No

Have you claimed more than the evidence supports?

Circle one: Yes | Maybe | No

### Evidence-based Conclusion Statement:

Have assumptions impacted your conclusions?

Circle one: Yes | Maybe | No

Does the claim directly answer the original research question?

Circle one: Yes | Maybe | No

## Instructor Evaluation Criteria for Astronomy Research Projects

**Poster Title:**

	Definitely, With Clear Evidence	Somewhat, implicit, or inferred	Not Clearly Evident		NOTES	
	<i>Circle one</i>					
1. Is the <b>research question</b> stated clearly and unambiguously?	A	B	C	D	F	
2. Does the project show <b>creativity</b> and originality of the question(s) asked?	A	B	C	D	F	
3. Is there an <b>appropriate procedure</b> for obtaining a conclusion?	A	B	C	D	F	
4. Are the <b>data tables</b> presented clearly?	A	B	C	D	F	
5. Is the <b>graphic presentation of the data</b> ( <i>graphs, etc</i> ) the best choice of alternatives?	A	B	C	D	F	
6. How <b>completely</b> was the problem investigated? <i>(sufficient experimentation)</i>	A	B	C	D	F	
7. Are there <b>adequate data</b> to support conclusions?	A	B	C	D	F	
8. Are the <b>conclusions and implications relevant</b> and accurate?	A	B	C	D	F	
9. Does the student <b>present and project self</b> professionally and clearly?	A	B	C	D	F	
10. Does the student <b>answer questions</b> with a <b>thoughtful attitude</b> ?	A	B	C	D	F	
11. Does the student <b>make further claims</b> or assumptions while speaking?	A	B	C	D	F	
<b>Total Points</b> _____ / 150 pts	poster _____ / 100 pts student eval of others _____ / 30 pts eval of others for student _____ / 20 pts					

Name of Peer Evaluator: \_\_\_\_\_

Title of Poster:	
Poster Author:	

**Specific Research Question:**

Is the research question **stated clearly**? | Yes | *Kind of* | No |

How **creative** is this research question? | *VERY* | *Creative* | *Somewhat* | *Not at all creative* |

**Comments/Justification:**

**Evidence:**

*Please provide a **quick** sketch of the evidence presented as described below:*

*- If this evidence is a graph, each axis should be labeled and a quick sketch of the data given.*

*- If this evidence is a table, you should have column headings.*

Is the evidence presented relevant to the research question? | Yes | *Somewhat* | No |

Is this evidence sufficient to answer the research question? | Yes | *Somewhat* | No |

**Comments/Justification:**

**Results/Conclusions:**

Does the conclusion answer the research question? | Yes | *Somewhat* | No |

Has the author claimed more than the evidence supports? | Yes | *Somewhat* | No |

**Comments/Justification:**

**What question did you ask?**

# ASTRONOMY LAB POSTER SESSION

Name: \_\_\_\_\_

Poster Number	Author	Poster Title	Impression of Presenter	Impression of Research
<b>1</b> black			NeedsWork Good VeryGood Superb	NeedsWork Good VeryGood Superb
<b>2</b> red			NeedsWork Good VeryGood Superb	NeedsWork Good VeryGood Superb
<b>3</b> blue			NeedsWork Good VeryGood Superb	NeedsWork Good VeryGood Superb
<b>4</b> green			NeedsWork Good VeryGood Superb	NeedsWork Good VeryGood Superb
<b>5</b> black			NeedsWork Good VeryGood Superb	NeedsWork Good VeryGood Superb
<b>6</b> red			NeedsWork Good VeryGood Superb	NeedsWork Good VeryGood Superb
<b>7</b> blue			NeedsWork Good VeryGood Superb	NeedsWork Good VeryGood Superb
<b>8</b> green			NeedsWork Good VeryGood Superb	NeedsWork Good VeryGood Superb
<b>9</b> black			NeedsWork Good VeryGood Superb	NeedsWork Good VeryGood Superb
<b>10</b> red			NeedsWork Good VeryGood Superb	NeedsWork Good VeryGood Superb
<b>11</b> blue			NeedsWork Good VeryGood Superb	NeedsWork Good VeryGood Superb

Poster Number	Author	Poster Title	Impression of Presenter	Impression of Research
<b>12</b> green			NeedsWork Good VeryGood Superb	NeedsWork Good VeryGood Superb
<b>13</b> black			NeedsWork Good VeryGood Superb	NeedsWork Good VeryGood Superb
<b>14</b> red			NeedsWork Good VeryGood Superb	NeedsWork Good VeryGood Superb
<b>15</b> blue			NeedsWork Good VeryGood Superb	NeedsWork Good VeryGood Superb
<b>16</b> green			NeedsWork Good VeryGood Superb	NeedsWork Good VeryGood Superb
<b>17</b> black			NeedsWork Good VeryGood Superb	NeedsWork Good VeryGood Superb
<b>18</b> red			NeedsWork Good VeryGood Superb	NeedsWork Good VeryGood Superb
<b>19</b> blue			NeedsWork Good VeryGood Superb	NeedsWork Good VeryGood Superb
<b>20</b> green			NeedsWork Good VeryGood Superb	NeedsWork Good VeryGood Superb
<b>21</b> black			NeedsWork Good VeryGood Superb	NeedsWork Good VeryGood Superb
<b>22</b> red			NeedsWork Good VeryGood Superb	NeedsWork Good VeryGood Superb

*Upon listening to the WHOLE presentation AND asking a question, please step away from the poster to continue your evaluation...*

**Overall:** In one sentence, what did you learn/take away from this poster?

**Presentation:**

Did the author make sense during the presentation? | Yes | Somewhat | No |

Did the author answer questions well? | Yes | Somewhat | No |

Was the author excited about his/her research? | Yes | Somewhat | No |

**Comments/Justification:**

**Poster:**

Was the poster itself a good color scheme? | Yes | Somewhat | No |

Was the poster itself well-organized? | Yes | Somewhat | No |

Was there any extraneous/unnecessary information? | Lots | Some | None |

**Comments/Justification:**

**Assumptions:** Did the author make any unreasonable assumptions? If yes, please describe.

**Did the author:** | *do the bare minimum* | *somewhere in between* | *go above and beyond* |

**If you were to give this poster a letter grade, what grade would you give? \_\_\_\_\_**

Give two **specific and thoughtful** reasons for your choice (could arrow to reasoning above if needed):