

Weather Data Analysis Project

Description: You and a partner will create 2 scatter plots in Microsoft Excel using the data collected by the weather balloon (at least 100 data points). You will then calculate the line of best fit and the correlation coefficient using Microsoft Excel. Finally, you will create a poster displaying the data and drawing conclusions about weather patterns based on the data. Part of your conclusions section should include how you think this data could help predict the weather.

The data (*variables*) collected were:

- Balloon Height
- Temperature
- Air Pressure
- Relative Humidity

Pick TWO of the variables to plot on each scatter plot. The independent variable is the x-value while the dependent variable is the y-value.

Example:

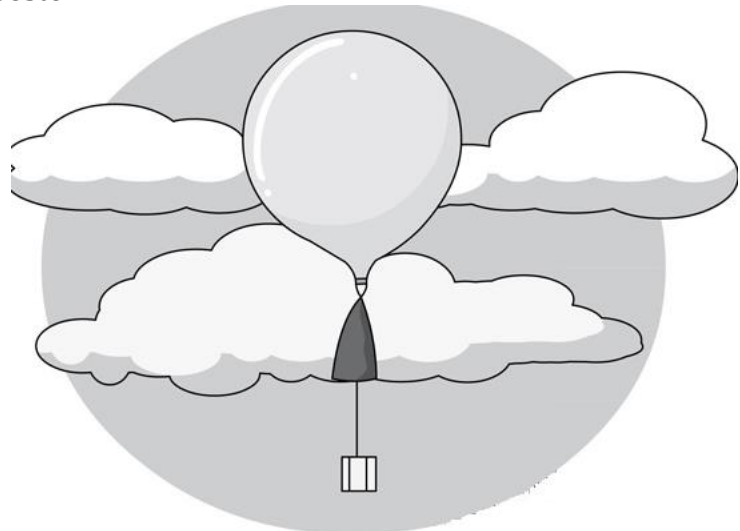
Temperature vs. **Height**

Dependent (y) – Independent (x)

The poster must include:

- Title
- One printout of each scatter plot graph (from Excel – 2 sheets total). Printout must have:
 - Title for graph (“y” vs. “x”)
 - Axis Titles
 - Line of Best Fit
 - Equation of Line
 - Correlation Coefficient
- Description of the location where the data was collected (GPS coordinates, geography/ landscape, time of day/year, general description of weather conditions)
- Pictures of the location & type of balloon used.
- Conclusions (3 to 5 complete sentences) describing what the data says about the two variables & how this data might be used to predict weather patterns

Turn over for grading rubric for the poster.



Rubric : Weather Data Analysis Project Poster

Teacher Name: **Mrs. Sampson**

Student Name: _____

CATEGORY	4 -- EXCELLENT	3 -- GOOD	2 -- FAIR	1 – NEEDS WORK
Required Elements	The poster includes all required elements as well as additional information.	All required elements are included on the poster.	All but 1 of the required elements are included on the poster.	Several required elements were missing.
Content - Accuracy	Graphs, titles and labels are accurate. Descriptions and conclusions are thorough, thoughtful and reflect knowledge of how different parameters relate to weather.	Graphs, titles and labels are accurate. Descriptions and conclusions are included but may be general or vague.	Graphs, titles and labels may contain minor inaccuracies. Descriptions and conclusions are minimal.	Graphs, titles and labels contain inaccuracies. Descriptions and conclusions are non-existent.
Graphics - Originality	Graphics show exceptional creativity.	One or two of the graphics used on the poster reflect creativity	The graphics are made by the student, but are based on the designs or ideas of others.	No graphics made by the student are included.
Attractiveness	The poster is exceptionally attractive in terms of design, layout, and neatness.	The poster is attractive in terms of design, layout and neatness.	The poster is acceptably attractive though it may be a bit messy.	The poster is distractingly messy or very poorly designed. It is not attractive.

FINAL SCORE: _____ / 16