**Daily Height Research Project**

Some people say that your height fluctuates on a daily basis. They believe your daily activities and sleep patterns will affect how tall you measure. They believe your height is different in the morning than it is in the evening. What do you think? You will complete an individual research project to prove your opinion with data. This information will be reported in paragraph form in a formal report as outlined in the rubric, typed in a Word document with a graph and data table inserted.

**Background:** Give some background information on the topic. Has anybody else done research in this field? On what information are you basing your Hypothesis?

**Question/Purpose:** You must come up with your own hypothesis regarding this question – what do you believe your results will prove?

**Procedures:** The next step is to design your experimental procedures: be sure to create conditions so that you are only testing the effect of the time of day on your height. How frequent? What time? When? Where? How?

**Variables:** What are you testing? What may affect your results? How will you determine if you are only testing one variable?

**Data:** Record all of your data and input it into a data table and a graph (this is easily done in Excel and pasted into Word).

**Analysis:** Analyze your data. What does your information tell you? What trends did you notice?

**Error Analysis:** What could have gone wrong? How could this have affected your results?

**Conclusion:** Does your data support your hypothesis? Did you have any errors? What would you do differently if you repeated this research? What did you learn from this experiment?

Follow the rubric on the following page as you complete your project.

Upload your document on the website <http://msgallagherlhs.weebly.com/daily-height-research.html> when it is complete. It must be uploaded by 3pm on December 18, 2015. 10 points will be deducted for each day it is late.

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| Category | 4 | 3 | 2 | 1 |
| Background Sources | A few reputable background sources are used and cited correctly. Material is translated into student's own words. | A few background sources are used and cited correctly, but some are not reputable sources. Material is translated into student's own words. | Material is directly copied rather than put into student’s own words and/or background sources are cited incorrectly. | No background sources are provided. |
| Question/Purpose (Hypothesis) | The question to be answered during the investigation is clearly identified and stated. | The question to be answered during the investigation is identified, but is stated in a somewhat unclear manner. | The question to be answered during the investigation is partially identified, and is stated in a somewhat unclear manner. | The question to be answered during the investigation is erroneous or irrelevant. |
| Procedures | Procedures are listed in clear steps. Each step is numbered and is a complete sentence. | Procedures are listed in a logical order, but steps are not numbered and/or are not in complete sentences. | Procedures are listed but are not in a logical order or are difficult to follow. | Procedures do not accurately list the steps of the experiment. |
| Variables | All variables are clearly described with all relevant details. | All variables are clearly described with most relevant details. | Most variables are clearly described with most relevant details. | Variables are not described OR the majority lack sufficient detail. |
| Data | Professional looking and accurate representation of the data in tables and/or graphs. Graphs and tables are labeled and titled. | Accurate representation of the data in tables and/or graphs. Graphs and tables are not labeled. | Graph or Data table is missing.  | Data is not shown or discussed.  |
| Analysis | The relationship between the variables is discussed and trends/patterns logically analyzed. Predictions are made about what might happen if part of the lab were changed or how the experimental design could be changed. | The relationship between the variables is discussed and trends/patterns logically analyzed. | The relationship between the variables is discussed but no patterns, trends or predictions are made based on the data. | The relationship between the variables is not discussed. |
| Error Analysis | Experimental errors, their possible effects, and ways to reduce errors are discussed. | Experimental errors and their possible effects are discussed. | Experimental errors are mentioned. | There is no discussion of errors. |
| Conclusion | Conclusion includes whether the findings supported the hypothesis, possible sources of error, and what was learned from the experiment. | Conclusion includes whether the findings supported the hypothesis and what was learned from the experiment. | Conclusion includes what was learned from the experiment. | No conclusion was included in the report OR shows little effort and reflection. |