FEEDBACK SHEET: RUBRIC C

Name of Experiment:	
Name:	
Peer giving feedback :	

Data Collection (Data Table and Graph): Correctly collect, present, organize, transform the data

Data Table = Correctly collect, organize and transform your data in a numerical data table. Be sure to include all trials and mean, median and mode
- ❏ Multiple trials _____ need to be included in table
- ❏ Mean, median AND mode should be calculated and listed in table
- ❏ Table should be clear and easy to understand with specific headings and labels
- ❏ Units need to be included in table

Graph = Correctly collect, organize and transform your data in a visual graph.
- ❏ Labels AND Units for x and y axis are missing or unclear.
- ❏ Title is missing or not specific. It should clearly explains the graph
- ❏ Key should be included (if applicable)
- ❏ Patterns (mean, median, or mode) not raw trial values should be graphed

Conclusion: Interpret, Hypothesis, Method, Future - Use additional paper | space if needed.

Interpret = Make a claim to explain the <u>evidence</u> from your data that answers the experimental question.
- ❏ Writer should re-state (<u>include</u>) and <u>answer</u> the experimental question by writing a claim
- ❏ Discuss the quantitative patterns in the data (mean, median, mode, range) to support your claim.
- ❏ Discuss the number of trails in the experiment (the mean was _____ over ____ number of trials)
- ❏ All components included
- ❏ Discussion incorporated outside information and/or went beyond what we discussed in class

Hypothesis =
- ❏ Writer should re-state (include) your experimental hypothesis
- ❏ Writer should discuss whether the evidence "supports" or "does not support" * the **hypothesis**
- ❏ Writer should compare the experimental mean to the positive and/or negative control(s)
- ❏ Writer should exchange the word "prove" with the word support (science can only disprove)
- ❏ All components included
- ❏ Writing incorporated outside information and/or went beyond what we discussed in class

Method = **Discuss** the <u>strengths</u> and <u>limitations</u> of the method. Include how the results were measured.
- ❏ Writer should discuss <u>more than one</u> strength and/or limitation of the investigation
- ❏ Discussion should include limitations of the Method of Measurement
- ❏ Writer should add the following strengths to their discussion
  - ❏ Quantitative data   ☐ Similar results for different groups
  - ❏ Precise Units of Measure   ☐ Multiple Trials
  - ❏ Easy to Repeat Methods   ☐ Used controls in the experiment
  - ❏ Specific Safety Instructions
- ❏ Writer should add the following limitations to explain why the data may be unreliable
  - ❏ Not repeated by different people or groups   ☐ not calibrate scientific tool
  - ❏ Errors in the Method, Process, or Equipment   ☐ not enough trials
  - ❏ Different results for different groups (i.e. different mass)   ☐ variables not kept consistent
  - ❏ Control data missing or inaccurate
- ❏ All components included
- ❏ Discussion incorporated outside information and/or went beyond what we discussed in class

Future = **Describe** improvements or extensions that could be made to the investigation.
- ❏ Writer should explain how to improve the experiment so as to fix the <u>limitations</u> of the lab.
- ❏ Writer should explicitly relate to the limitations identified
- ❏ Discuss any new questions / experiments you could you pursue in the future?
- ❏ All components included
- ❏ Writing incorporated outside information and/or went beyond what we discussed in class

Use additional paper / space as needed

Criterion C - Processing and Evaluating			
Level	**Peer**	**Self**	**Level Description**
0			The student does not reach a standard identified by any of the descriptions below.
1-2 peer: self:			The student is able to:
			i. collect and present data in numerical and/or visual forms
			ii. interpret data
			iii. state the validity of a hypothesis **with limited reference** to a scientific investigation
			iv. state the validity of the method **with limited reference** to a scientific investigation
			v. state limited improvements or extensions to the method.
3-4 peer: self:			The student is able to:
			i. correctly collect and present data in numerical and/or visual forms
			ii. accurately interpret data and **describe** results
			iii. state the validity of a hypothesis based on the outcome of a scientific investigation
			iv. state the validity of the method based on the outcome of a scientific investigation
			v. state improvements or extensions to the method that would benefit the scientific investigation.
5-6 peer: self:			The student is able to:
			i. correctly collect, organize and present data in numerical and/or visual forms
			ii. accurately interpret data and **describe** results **using scientific reasoning**
			iii. outline the validity of a hypothesis based on the outcome of a scientific investigation
			iv. outline the validity of the method based on the outcome of a scientific investigation
			v. outline improvements or extensions to the method that would benefit the scientific investigation.
7-8 peer: self:			The student is able to:
			i. correctly collect, organize, transform and present data in numerical and/or visual forms
			ii. accurately interpret data and **describe** results **using scientific reasoning**
			iii. discuss the validity of a hypothesis based on the outcome of a scientific investigation
			iv. discuss the validity of the method based on the outcome of a scientific investigation
			v. describe improvements or extensions to the method that would benefit the scientific investigation.

Use additional paper / space as needed