

Name:

Date:

Class:

Engineering Notebook Requirements and Rubric

Will be typed up into a single shared document (e.g., Google Docs) with every page numbered.

Project Requirements

1. Title – Define the Problem. “How do different materials allow for thermal energy transfer, and how effective and sustainable are they?”
2. Background Research – What is thermal energy transfer? How does each type of thermal energy transfer occur? What types of material make it harder or easier for thermal energy to be transferred?
3. Brainstorming Ideas – list any and all things you and your group come up with for types of household substances that could be used to make it harder for thermal energy to be transferred out of a “house”.
4. Daily Entries – record what was done each day and what the plan is for the next, including what should be brought to class by whom.
5. Data Tables of the collected data for the two materials that were chosen to be used.
6. Graphs of the results of the data inserted with appropriate labels and units.
7. Conclusion – write up a conclusion about each of your insulative materials that address the effectiveness at not allowing thermal transfer to occur as well as how sustainable that material would be if forced to use as insulation.

Rubric

- Title – 5 points
- Background Research – 10 points
 - 2 points for defining energy transfer
 - 6 points for defining conduction, convection, and radiation
 - 2 points for describing what makes it harder or easier to transfer thermal energy
- Brainstorming Ideas – 5 points
- Daily Entries – 10 points – description of what was accomplished each day
- Data Tables – 15 points (5 points for three complete data tables)
- Graphs – 30 points (10 points for each graph properly labeled and plotted)
- Conclusion – 25 points
 - 5 points for describing how effect each material was – total of 15
 - 5 points for conclusion as to which would be the best if forced to choose only one
 - 5 points for using evidence to support selection)