**Straw Report Rubric**

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| --- | --- | --- |
| **Writing quality and overall presentation** | **15** | |
| Free of grammar errors | 2 |
| Writing is clear and easy to follow | 2 |
| Not in first person | 1 |
| Organized according to guidelines | 1 |
| Cover page (title, group, members, section, professor) | 1 |
| Table of Contents (list sections and pages) | 1 |
| Abstract (purpose of report and main result) | 2 |
| Intro (goal of experiment) | 3 |
| Procedure (experimental set up, including tester information) | 2 |
| **Data presented in clear manner (table)** | **7** | |
| Mass | 1 |
| Increment | 1 |
| Load Applied to Straw | 1 |
| Averages | 1 |
| Standard deviation | 1 |
| Presented in table | 1 |
| Captions/headings | 1 |
| **All Units specified** | **3**  Loose one point for each missing unit until all 3 gone | |
| **FBD provided** | **10** | |
| FBD included | 2 |
| Clear Caption | 2 |
| Relevant lengths labeled | 2 |
| Correct applied forces drawn | 2 |
| Correct reaction forces drawn | 2 |
| **Correct FBD analysis** | **15**  For calculation mistakes, deduct one point for each you find. | |
| Correct ΣFx=0 set up (based on FBD) | 3 |
| Correct ΣFy=0 set up (based on FBD) | 3 |
| Correct ΣM=0 set up (based on FBD) | 3 |
| Correct Reaction forces found (based on F and M equations) | 6 |
| **Graph has axis labels, legend, etc** | **5** | |
| Axis labels | 2 |
| Caption | 1 |
| Legend | 1 |
| Appropriate scale | 1 |
| **All data points (your three plus additional)** | **5** | |
| Your points | 2 |
| Three additional | 2 |
| Other group with a different symbol | 1 |
| **Line fit for** **Load vs. 1/L2** | **5** | |
| Line drawn for your 3 points | 2 |
| Equation for your 3 points | 2 |
| Line drawn for 6 points | 1 |
| Equation for 6 points | 1 |
| **Error bars drawn based on Load vs.** **1/L2** | **5** | |
| Error bars drawn | 2 |
| Error bars are twice standard deviation | 3 |
| **Uncertainty estimate calculated** | **5** | |
| For your 3 points | 5 |
| For all 6 points | 5 |
| **Plot of Load vs L data** **(NOT 1/L2) and best model fit** | **5** | |
| **Dominant error sources identified, plot bounding curves for Load vs L (NOT 1/L2)** | **10**  Discussion of errors caused by testing method and variation of straws, estimates of uncertainty (you may add more plots to discussion if necessary) | |
| **General discussion of error** | **5** | |
| Is it better to increase trials per length or number of lengths? | 1 |
| Does original line fit when you add colleague’s data? | 1 |
| What are benefits of using full class’s data? | 1 |
| Other comments on error | 2 |
| **Discussion of data and fitting given** | **5** | |
| Describe fitting method | 1 |
| Is error of fit small or large compared to standard deviations | 1 |
| Should error of fit or standard dev be used for failure load? | 1 |
| How will this impact truss design? | 2 |