Name: _____ Period: _____

"Roller Coaster Lab" Scoring Sheet

+ /23

Final Draft Quality:

+ /4

- ☐ Full lab report is typed and graph is completed in LoggerPro
- ☐ Heading (name, partner(s), period, teacher, and date) & Lab Title
- ☐ Have I attached my pre-lab handout (with completion stamp)
- ☐ Have I attached my post-lab handout (with completion stamp)

Table s and Graphs – Table 1: Raw Data

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- ☐ Do I have an appropriate title and number (sequentially)? *("Raw Data" is NOT an appropriate title)*
- ☐ Do I have columns properly labeled with headings and trials nested under the appropriate heading?
- ☐ Do I have the correct units in the column headings *(and not in the table itself)*?
- ☐ Did I include appropriate uncertainties for my raw data?
- ☐ Do I have appropriate precision for my raw data?
- ☐ No calculated values are included in my table *(no averages or conversions!)*
- ☐ Is my table formatted so it is clear and easy to interpret? *(borders, column headings distinct from data, etc.)*
- ☐ Did I include the mass of my marble?
- ☐ Did I include the diameter of my marble?

Table 2: Calculated Average Time, Conversions, and Velocity

- ☐ Do I have an appropriate title and number (sequentially)? *("Calculated Values" is NOT an appropriate title)*
- ☐ Do I have each column properly labeled with heading including correct units?
- ☐ All required calculated values are present in the table and my conversions are correct
- ☐ Do I have appropriate significant figures for my calculated data?
- ☐ Have I included a correct sample calculation for average time and height with units in my final answer?
- ☐ Have I included a correct sample calculation for velocity with units in my final answer?

Table 3: Calculated Kinetic, Potential, and Mechanical Energies

- ☐ Do I have an appropriate title and number (sequentially)? *("Calculated Values" is NOT an appropriate title)*
- ☐ Do I have each column properly labeled with heading including correct units?
- ☐ All required calculated values are present in the table
- ☐ Do I have appropriate significant figures for my calculated data?
- ☐ Have I included a correct sample calculation of potential energy with units in my final answer?
- ☐ Have I included a correct sample calculation of kinetic energy with units in my final answer?
- ☐ Have I included a correct sample calculation of total mechanical energy with units in my final answer?

Graph 1: Potential, Kinetic, and Mechanical Energies

- ☐ Do I have an appropriate title and number on my graph?
- ☐ Do I have appropriate labels, including correct units, on each of my axis?
- ☐ Are my variables on the correct axis?
- ☐ Did I include total mechanical energy on my graph?
- ☐ Have I included a best fit line/curve for mechanical energy?
- ☐ Did I include kinetic energy on my graph?
- ☐ Have I included a best fit line/curve for kinetic energy?
- ☐ Did I include potential energy on my graph?
- ☐ Have I included a best fit line/curve for potential energy?
- ☐ Did I include a key that indicates which plotted line relates to each type of energy?

Conclusion

+ /3

- ☐ Have I included a discussion of conservation of energy (#1a)?
- ☐ Have I included a discussion of the relationship between potential and kinetic energies (#1b)?
- ☐ Have I included my percentage of mechanical energy lost (#2)?
- ☐ Have I shown how I calculated my percentage of mechanical energy lost (#2)?
- ☐ Have I included something that can account for the loss of energy (#3)?
- ☐ Is the source for loss of energy reasonable (#3)?