Physical Properties Rubric

The exemplary category includes everything in the proficient category as well. The other two categories stand alone.

Criteria	Exemplary: All Proficient Criteria PLUS:	Proficient	Progressing	Not Yet
Follows Directions	Completed tasks without any assistance from peers or teachers.	Consistency of slime is evidence of proper procedures and measurements. All tasks and questions are completed clearly with minimal assistance from teacher.	Consistency of slime is evidence of inaccurate procedures or measurements. Some tasks are not completed thoroughly or help from teacher is needed.	Directions are not followed and measurements are inaccurate. Many tasks are not completed and help from teacher is needed.
Procedures of Data and Calculations	Information is displayed in a detailed data table showing all math work.	Measurement for mass, volume, temperature, and density are recorded accurately. Measurement data is organized and legible. Uses measurement tools accurately (temperature probes, digital or triple beam balance, and graduated cylinders) and without help.	Minor inaccuracies in measurements and calculations of either mass, volume, density, or/and temperature. Measurement data is unorganized but legible. Needs help with use of tools for measuring.	Measurements for either mass, volume, density, and/or temperature are grossly inaccurate and calculations are incorrect. Measurement data is unorganized and illegible. Needs help with use of tools for measuring.
Content	Describes and/or predicts chemical change (endothermic) and chemical properties (flammable, non-toxic, etc.) that took place during experiment.	Describes the physical changes that took place during lab activity clearly and accurately. Relationships among mass, volume, and density are communicated accurately.	Describes the physical changes in substance(s), but descriptions are vague or inaccurate, and illegible. Relationships among mass, volume, and density are inaccurate or illogical.	Physical changes are not described or are inaccurate. No attempt at analyzing the relationships among mass, volume, and density. Heat energy analysis is not made.

		Includes an accurate statement about the heat energy that took place during experiment. Of the major physical properties discussed in class, nine properties are correctly identified including mass, volume, and density.	Heat energy analysis is incorrect. Six to seven physical properties are listed which include at least three measurable properties (mass, volume, and density).	Less than six physical properties are identified and some of those are inaccurate.
Data Organization	Other graphic organizers, beyond charts, are used to enhance and communicate information.	Data charts are organized so measurement, descriptions, predictions, and conclusions are clearly communicated.	Data charts are used but are hard to read and understand or are illegible.	Data is unorganized and illegible. Charts or other organizing structures are not used.
Analysis of Data	Statements incorporate generalization and synthesis. Descriptors in prediction and reflection statements use scientific language and are quantified.	Five analysis statements about mass, volume, temperature, and density are made using the data from class charts. Two logical graphs are constructed using spreadsheet software that represents personal conclusions derived from class data chart. Reflection statements include thoughtful analysis of the use of data management strategies and comparison of student's own data to the class data. Predictions made are congruent with the existing data.	Two logical conclusions are made using the class data charts. Two graphs are constructed but not congruent with data from chart. Reflection statements are not explained clearly. Predictions made about physical changes in properties of new substance do not match existing data.	Analysis statements are missing or statements are not based on data. Graphs are not constructed. Reflection statements are shallow or not explained clearly. No predictions are made.