

Lab Report Structure and Grading for Report 2

Abstract **(10 points)**

Method **(10 points)**

Data (1,2 5, and 6) and Discussion Section (3, 7 and 8) **(70 pts, distributed as shown below)**

Spreadsheet template **(10 points)**

Part 1

1. Graph (10 pts)

- a. Scatter plot (2 pts)
- b. Labeled (2 pts)
- c. X axis(mint yr) and y axis(mass) correct (2 pts)
- d. Data plotted as two separate series (2 pts)
- e. Regression lines added for each series (2 pts)

2. Significance (10 pts)

- a. Results displayed from Regression tool in tool pack (5 pts)
- b. Results correctly interpreted (5 pts)

3. Hypothesize about mass gain or loss (10 pts)

4. Hypothesize about the discontinuity (in class, a free 5 pts)

Part 2

5. Comparison of the mean volumes (t-test) (10 pts)

- a. Correct calculation of the average volumes of the pennies (5 pts)
- b. Correct use of the t-test to compare the means (5 pts)

6. Comparison of the mean densities (10 ps)

- a. Correct calculation of the average densities of the pennies (5 pts)
- b. Correct use of the t-test to compare the means (5 pts)

7. Interpretation of the discontinuity given the data obtained in Part B (5 pts)

8. Speculate on the metals used pre-1982 and post-1982 based on the density data and analysis of consistency with what is known or researched (cite references) (10 pts)