

# Half-Life Lab

Name \_\_\_\_\_ Per \_\_\_\_\_

Half-Life is the time for one half of a radioactive isotope to decay into something else. See the radioactivity decay charts.

**Purpose:** To perform a half-life "decay series" with pennies, graph and interpret the results.

## **Procedure:**

1. Take 100 pennies.
2. Mix them in a cup.
3. Dump 'em on the table.
4. Sort out those whose heads are up and stack them.
5. Return the remainder to the cup, mix, dump, and stack those whose heads are up.
6. Continue until all pennies are consumed.
7. Mark a piece of graph paper into quarters in preparation to making four graphs.
8. Bar graph the stacks with the number of pennies on the y-axis and the number of the stack on the x-axis.
9. Repeat the above two more times.
10. Average your three graphs onto a fourth graph by totaling the pennies in each column and dividing by three.
11. Write an explanation of the variations in the graphs and the shape of the average graph.
12. Explain what this has to do with radioactivity.
13. Critique