



Half – Life of Candium

Name _____

Materials

- 50 candy pieces
- Resealable bag
- Stop watch or visible clock that displays seconds
- Graph paper
- Paper towel

Procedure

1. Place atoms (candy pieces) in the bag.
2. Seal the bag and gently shake for 10 seconds.
3. Gently pour out candy.
4. Count the number of pieces with the **print side up**. These atoms have "decayed."
5. Consume "decayed" atoms.
6. Return only the pieces with the print side **down** to the bag. Reseal the bag.
7. Record the time.
8. Consume the "decayed" atoms.
9. Gently shake the sealed bag again for 10 seconds.
10. Continue shaking, counting, and consuming until all the atoms have decayed.
11. Graph the number of undecayed atoms vs. time.

Data Sheet

Half-Life	Total Time	# of Undecayed Atoms	# of Decayed Atoms
0	0		0
1			
2			
3			
4			
5			
6			
7			
8			
9			
10			

Using a whole sheet of graph paper and the data above, make a graph with time on the x-axis and number of atoms on the y-axis.

Candy Half-Life

(Please write complete sentences):

1. Define half-life in your own words.

2. In the experiment, what was the half-life of the isotope "Candium?"

3. At the end of 2 half-lives, what fraction of the atoms had not decayed?

4. Describe the shape of the curve from the graph of your data?

5. As a class, compare and contrast the graphs made by the different lab groups.

