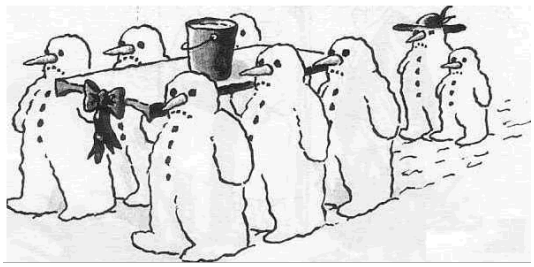


Student Sheet
Name_____Period____

Title: Radioactive Frosty

Introduction: Frosty the Snowman is melting in a funnel at your lab station. Sometime, during the last day, he was brought indoors, where his body began to immediately decay (not unlike radioactive decay). There were no eyewitnesses to the time of the crime but like good scientists, you will be able to solve the mystery of the crime against Frosty.

And… don't worry, he'll be back again someday.

Materials: Funnels, ring stands, ring, graduated cylinder, anything else you might need

Directions:

1. Determine the current state of decay of Frosty. Record your results.
2. Write the procedures below that you will use to determine how long Frosty has been deceased (indoors).
   a.

   b.

   c.

   d.

   e.

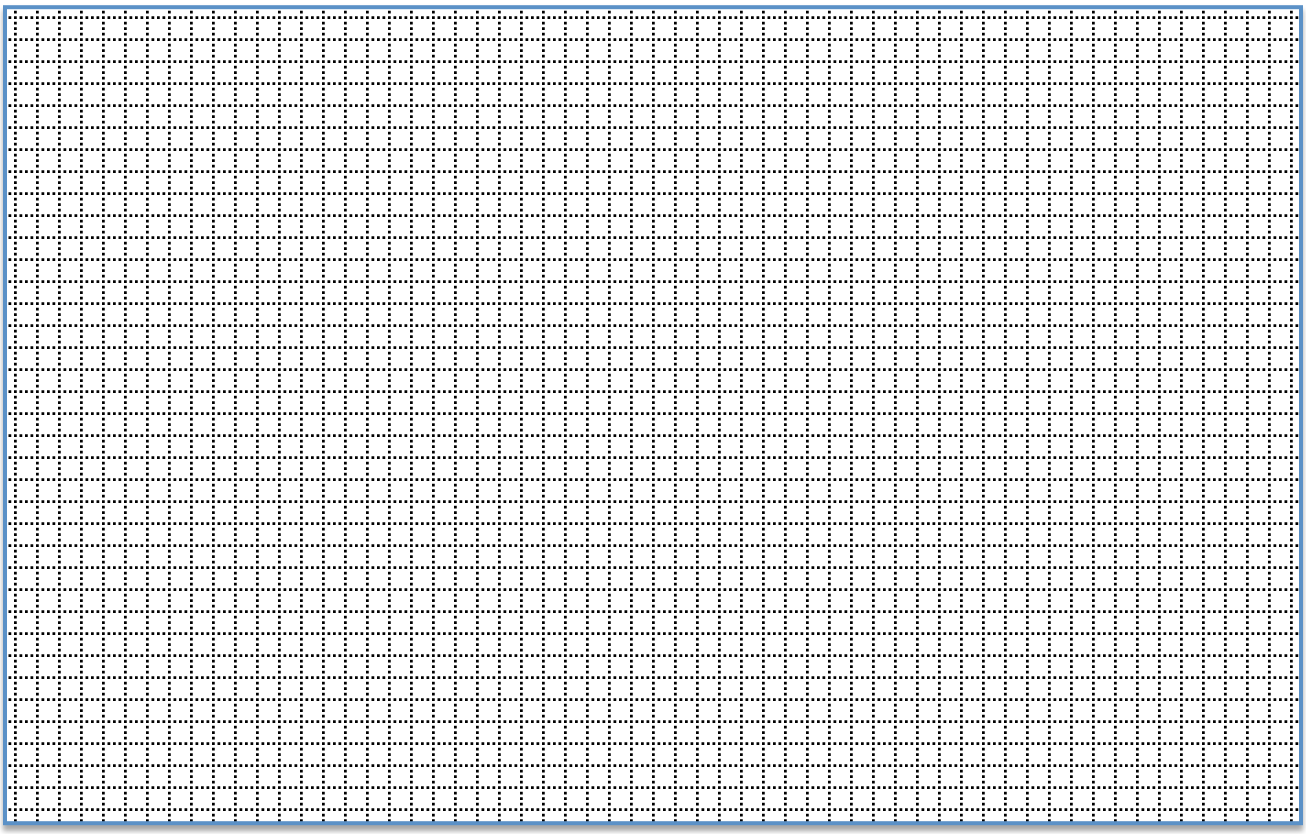
3. Record your data and create a graph to analyze it. Think about the units you will use and what rate of decay means.

Data:

Current condition of Frosty:

Data Table:

Graph:



Analysis:

1. What units did you use for the rate at which Frosty melted?

2. What property did you measure to calculate the rate?

3. When do you think Frosty met his demise? Why?

4. On your graph, mark the time you think Frosty started to melt and when you arrived on the crime scene.

5. Relate the melting of Frosty to the decay of carbon-14. Describe specifically what the comparisons are.

Conclusion: