Carbon Dating
Algebra I or Algebra II
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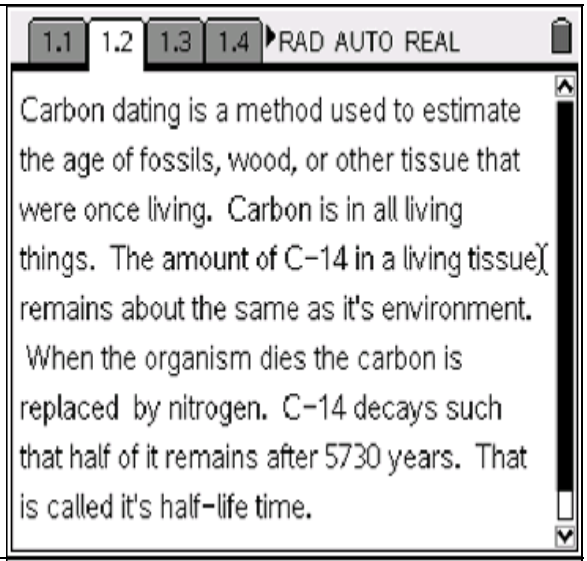
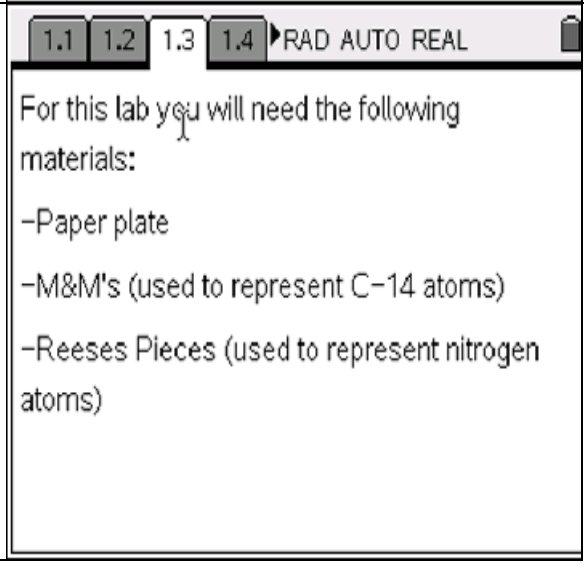
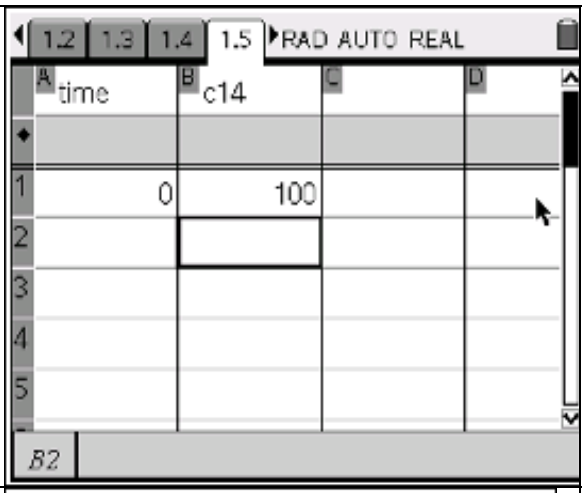
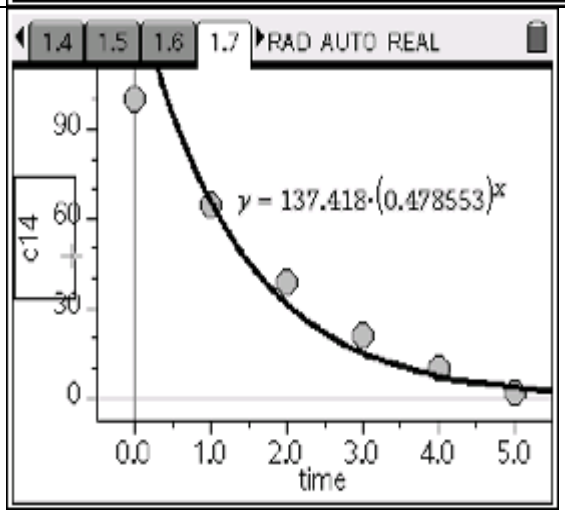
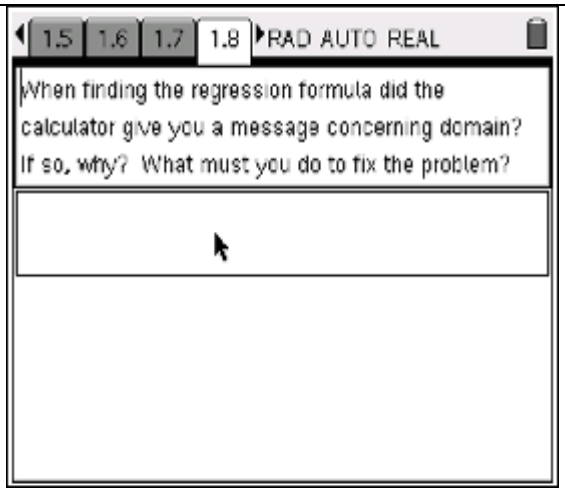
This information was taken from a problem in a Numb3rs Episode and adapted to the TI-Nspire handheld.

SPI 3103.5.3 Analyze patterns in a scatter-plot and describe relationships in both linear and non-linear data.

I have used this lab in both my Algebra I and Algebra II classes. Prior to the lab we have discussed exponential regression and half life.	
Since candy is expensive, I have also used cheerios in place of the Reeses Pieces. It works just as well.	

In their spreadsheet they should have a column for time where 0 represents the initial value. They should also have a column for the number of carbon atoms remaining. I labeled mine c14.	
The students should use their data to find an exponential regression formula. Sample data shown.	
The students are asked a question regarding domain. If in their experiment all C14 atoms die and they include a y value of 0 in their domain, they will get an error message. This should be discussed prior to the lab.	

Hopefully the students will be able to make the connection between the “a” value of their equation being close to the initial value of their C-14 atoms and the “b” value being very close to .5.